THE CULTIVATOR.

NEW "TO IMPROVE THE SOIL AND THE MIND." SERIES.

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THE CULTIVATOR

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(*Each no. containing* 16 *pages,*)

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THE CULTIVATOR.

MONTHLY NOTICES.

COMMUNICATIONS have been received since our last, from J. Holmes, S. Tillotson, * * *, John Williams, A Workingman, R. W., L. Durand, C. Rich, H. D. Sewall, J. G. Chambers, James Boyle, W. R. Sanford, J. B. Cook, J. J. T., X. Brutus, J. W., C. H. Tomlinson, J. J. Thomas, D. H. M., Center Draught, A Subscriber, L. Feuchtwanger, J. N. H.

Our thanks are due to the Hon. J. COLLAMER, M. C., for his speech on wool and woollens—WM. R. PRINCE, Esq. for the Flushing Horticultural Society's Address—To WM. KENRICK, Esq. for a copy of the new edition of his New American Orchadist—To J. R. BAILEY, Esq., New-York, for the Leicester (Eng.) Journal, containing the proceedings of the Leicester Agricultural Society.

☞ An article from PROF. HALL, in reference to a communication in our June number, signed "A Practical Farmer," will appear in our next.

☞ The engraver having failed to finish the cut, we are again obliged to defer the communication of "Richmond."

A NEW CORN-PLANTER.—Dr. BEEKMAN, President of the State Ag. Society, informs us that Mr. James S. Griswold of Spencertown, Col. co., has invented a machine for planting corn, which he has examined, and which he thinks, so far as he can judge without an actual trial, will answer the purpose most admirably. It is simple and easily kept in order.

PORTABLE GRAIN MILL.—We saw in the street the other day a portable mill, which from the simplicity of its construction, &c., we are inclined to think well worthy of trial. The patentee is Mr. Erastus Arnold of Otego, Otsego co., N. Y. It will grind any kind of grain fine, but is more particularly designed for grinding grain for feeding animals. A principal excellence of the mill, consists in its being so constructed as to avoid heating the meal in grinding. It can be had of A. Wheeler & Brother, Chatham 4 corners, price $30—for a size suitable for the attachment of a horse-power.

PROFITS OF FINE FRUIT.—Three years ago, Samuel Hecox of Lyons, N. Y. sold seven dollars worth of cherries from a tree of moderate size, of the Yellow Spanish; Zerah Burr of Perrinton, N. Y., sold eight dollars worth from two small and very early cherry trees, last summer; and Wm. Otley of Phelps, N. Y. sold ten dollars worth of Greenings (R. Island) from a single tree, which bore forty bushels. On what capital, would a large orchard of such trees pay an annual interest?

"COTTAGE VILLA."—We like the design for a Cottage Villa, sent us by *N. C.* of Washington, very well. The drawings, however, are too large for our columns; and to get them reduced, and the engraving made, would cost about $40—a larger sum than we can afford at present.

"THE SILK QUESTION SETTLED.—Report of the Proceedings of the National Convention of Silk-Growers and Silk-Manufacturers, held in New-York, Oct. 13, 1843." This is a pamphlet of eighty pages, drawn up under the direction of the American Institute. It comprises a great amount of valuable information in reference to the silk-business in this country, drawn from those persons who are practically engaged in it. There is no reasonable doubt that this is to become a great silk-producing country—especially some portion of the Ohio and Mississippi vallies—where its full success is already demonstrated. This pamphlet ought not only to be in the hands of every silk-grower, but every well-wisher to the country. It was prepared for the press by that indefatigable friend of the silk cause, I. R. BARBOUR of Oxford, Mass., to whom we are indebted for a copy of the second edition. This edition has been enlarged and improved, and the work stereotyped, so that is now afforded at the low price of 60 copies for $5.—150 for $10—1000 for $70. Orders for it may be addressed, post-paid, to Mr. Barbour, Oxford, Mass.

PLOWS.—Mr. L. Durand, writing to us on the subject of plows, says:—"Last spring I sent to Boston and obtained one of Prouty & Co's. Centre-Draft sod plows, which we have used in turning over a meadow for corn. Although I had formed a high estimate of these plows, yet I must say "the half had never been told." When there was no stone to interrupt, it would run the whole length of the field without breaking the furrow, and the draft is a third easier, running at the same depth, than any other plow I ever used. The coulter is set into the beam in such a manner that it cuts under on the land-side some two inches, so that each furrow shuts close to the previous one, and the whole being plowed in this manner, makes a perfectly smooth surface. The wheel attached to the end of the beam is of great advantage on a smooth surface, as it assists the draft, and the plow can be guaged to any depth. On stoney and uneven ground the wheel can be taken off. One of the principles of this plow is to run steady, which it will do for some distance without holding. Perhaps

on rough and rocky soils, a shorter plow would work better than this, as when thrown out of the ground it would catch quicker than a long one like the Centre-Draft. There are but few soils, however, that this plow cannot be used on to advantage." "The workmanship of these plows is admired by all. Mine being the only one in the town, (and perhaps in the county,) it created quite an excitement with the farmers who have seen it, and it is hoped that others of the kind will soon be in use here." "There are many other kinds of improved plows, among which are Ruggles, Nourse & Mason's, Howard's, &c., and judging from the premiums they have taken, they must be very perfect. In conclusion I would say, that, as there is no implement used in farming more essential than the plow, procure a good one, and never think of plowing sward without a cutter, for you cannot make smooth work without one."

WIND-MILL.—In answer to the inquiry of Mr. J. Wilkinson, inserted in our May No., we will state that we have been shown a model of a wind-mill invented by Mr. George Parker of Corinna, Penobscot co., Maine. It is simple in its construction, and may be readily adapted to various purposes. Mr. Parker states that one can be made for a well, with all necessary apparatus for raising water, the whole cost of which would not exceed twelve dollars.

☞ Mr. J. G. CHAMBERS, of Frederica, Del., gives us some account of the mode of cultivation practiced in his neighborhood. We trust the bad management of which he speaks is not by any means common in Delaware, and that the farmers of every section may soon learn the benefit of a more improved system. Mr. C. says:—"Our county is completely exhausted by bad tillage. The system practiced, has been to clear the land, put in corn, followed by wheat, rye or oats—put the farm into two or three fields, and as soon as the fields are clear of grain, in with the cattle, sheep, hogs, and horses, from the first day of January to the last day of December, until the land is so reduced that there is not more than one-fourth of it will bring wheat at all, and not corn enough to reimburse the tiller. So you must not be surprised at my inquiry in a former communication, how to start right. We cannot get any manure but what we make on the farm, except lime, and that costs too much. It is my opinion that fully one-half of the present inhabitants of the lower part of Delaware, and the eastern shore of Maryland, would greatly better their condition by tilling one half the land they now go over. But make this proposition to a man and he will answer, 'I can scarcely get along now, and if I put myself on one half, I shall starve.'

"We have had a warm, dry spring. Wheat has been much injured by the fly, but is fast reviving by the late rains."

INJURY TO TREES FROM MICE.—Mr. Samuel Allen, of Black-Rock, showed us, the other day, several hundred apple and pear stocks which had been so much injured by mice during the winter, that the owner of the nursery in which they stood, had thrown them away—or rather had given them to Mr. A. He had them carefully cut down below where they had been gnawed, grafted them with good scions of choice varieties, and set them out in a good soil. They appeared to be doing well. The suggestion may save trees which are valuable.

GEOLOGICAL SURVEY.—It is not perhaps very generally known that the legislature lately authorised the sale of copies of the Geological Survey, at the rate of $1 per volume. A share of the books will be sent by the secretary of State, to the treasurer of each county; and persons who want to secure copies should enter their names with those officers—depositing $8 or $10 at the same time. There will be fourteen or fifteen volumes, when the work is completed—all quartos, and mostly thick volumes. Academies have the prior right of purchasing at $1 per volume within a period of six months from the passage of the law.

TO RETAIN THE AMMONIA OF URINE.—Dr. Jackson gives in the New-England Farmer, the following as an excellent mode of collecting the salts and gaseous matters of urine. "Take 20 measures of dry peat and one of ground gypsum, and mix well together. Place barrels half full of this mixture in places where urine may be collected, and it will be found that the salts and ammonia of many barrels of urine will be consolidated in this mixture, without giving the slightest odor, or being in any way offensive, for the salts are taken up, and the carbonate of ammonia, formed by decomposing urea, is immediately absorbed. A mixture of peat or swamp muck and gypsum, will also serve to absorb all the disagreeable gases of vaults, which will be converted into valuable fertilizing compounds."

CATTLE.—A friend informs us, as an evidence of the emulation created by our Agricultural exhibitions, that among those who are preparing animals and articles in western New-York, he knows one gentleman who is getting ready *ten yoke of cattle* as his contribution in that line towards the next State Fair at Poughkeepsie. The "River counties," and the fine cattle of New England, should be largely and nobly represented on the occasion.

SHEEP AND WOOL.—In a communication from Daniel S. Curtiss to the State Ag. Society, he mentions that he has on his farm in Canaan, Col. co., a flock of sheep which he commenced seventeen years ago, from "good Escurial merino" ewes—using the best Saxon bucks he could get since then. The flock has improved much in quality and quantity—the fleeces averaging, for the last two years, three pounds six ounces; and Mr. C. thinks the clip of this year will exceed that average a couple of ounces. His flock consists mostly of bearing ewes and yearlings, and he keeps no wethers.

☞ Persons having good stock may find their interest in reporting their experience to the State Society.

HARVESTING WHEAT, &c.—"A Working Man" cautions farmers against harvesting wheat too early. He says—"it is doubtless a good plan to cut grain before it is quite ripe; but farmers would err widely if they should cut it when absolutely in the milk. It would be so damp as to render its preservation difficult." We did not understand the statement alluded to by our correspondent, as representing the yield of the crop at an average of 70 bushels per acre. To have made the experiment of value, the product of an acre or more should have been given. No farmer should adopt any practice he may see detailed in the agricultural papers, or which may be related to him by his neighbors, without considering whether his circumstances, location, soils, &c. render it probable that such practice will be the best for him to pursue. Much, for instance, has of late been said in favor of the use of charcoal as a manure, and where a farmer is so situated that he can make an experiment with it at a trifling expense, it is doubtless worthy of a trial; but the man who should leave his stable manure in his yard, and depend upon charcoal alone, would be guilty of consummate folly. So with a hundred other things, several of which are mentioned by "A Working Man' —the farmer should read, reflect, and decide with judgment and common sense whether the practices of others are suitable for him.

FARMING IN TENNESSEE.—Mr. James Holmes of Readyville, Tennessee, gives us some interesting remarks in relation to the state of agriculture, &c., in that State. Mr. H. speaks of the practice of sowing wheat on corn-ground while the corn is standing, and says it is quite common to do so where the weeds and grass are so thick among the corn that it is quite impossible to cover the grain with plows or other implements. The yield in such cases, although the ground is naturally of the best character, is not over twelve bushels per acre—yet, he says, most farmers are satisfied, because they get as much as their neighbors. Indian corn, he thinks, does not yield over 35 bushels per acre, take one year with another, on what is called very good land. But we cannot doubt that agriculture is improving in that section—and with advantages of soil and climate, perhaps not excelled by any State, we trust Tennessee will one day assume the rank to which her natural resources entitle her.

PEACH TREES.—Mr. Charles J. Ryan, of Long Island, in a letter to us on the cultivation of peach trees, says he thinks plowing among them is injurious. "The peach," (says he,) "is a tree whose roots have a tendency to run near the surface of the earth. At the end of every years'

growth, is to be found a number of fibres, which constitute the main support of the tree. If these rootlets or fibres are disturbed by a plow, two or three times in a year, what can be expected but the yellows, or something else as bad?" He observes that he has seen the peach tree survive its twenty-fifth year, producing good crops both in size and quality. The ground was cultivated with different sorts of culinary vegetables. The plow was not used, and care was taken not to injure the roots.

POUDRETTE.—A correspondent at Long-Island, writes us that he has used poudrette—he manured a piece of corn-land partly with poudrette, (a gill to a hill, and some with a pint to a hill,) and partly with street and stable manure. The crop was best where was put a pint of poudrette to a hill. His neighbor used it for wheat, broadcast, at the rate of 40 bushels to the acre. The crop was so inferior that he has used none since. Now we are not told here how much of the street and stable manure was used to a given extent of land, or what was the relative expense of the manure and poudrette. What we want to know, is, which is the most *profitable* manure—and in order to be able to tell this, those who make experiments, must state the relative expense of the different substances used, for a given extent of land, as well as the product and nett value of the crop from each sort.

CHEESE-PRESS.—In a note to an article on Gloucester cheese, published in our May No., we stated we presumed a beam press was used. Our correspondent "R. M." says, "this is an error—it is a perpendicular press, merely a large stone 3 or 4 hundred weight, the cheeses placed on top of each other, the last always at the bottom, and of course gets the hardest *squeeze*."

FAIR AT WASHINGTON, MISS.—From the Concordia Intelligencer, we learn that the annual spring fair of the Adams county Horticultural, Agricultural, and Botanical Society, took place on the 17th of April. The attendance was very large, numbering several hundred *ladies*. The display of stock, among which were several fine Durhums, showed clearly that there is a spirit of improvement at work. In the department of *Home Manufactures*, were specimens of jeans, plain and colored, hearth-rugs of beautiful colors and texture, fine samples of butter, &c. &c. There was also a respectable show of implements; and taken altogether, the exhibition may be said to have been highly gratifying to the friends of improvement.

J. S. SKINNER, Esq. has been appointed to deliver an address before the Agricultural Society of New-Castle county, (Del.) at their next exhibition. Great preparations, we learn, are being made to render the exhibition superior to any former one held by that society.

TENNESSEE AGRICULTURIST.—Mr. FANNING, the former editor of this paper, being engaged in the management of Franklin College, Mr. CHARLES FOSTER, formerly one of the editors of the Western Farmer and Gardener, takes charge of the Agriculturist. In addition to other high qualifications, Mr. Foster is one of the best draughtsmen in the country, and it is proposed to illustrate each number of the Agriculturist with engravings from his pencil, of country residences, animals, fruits, plants, flowers, &c.—a sample of which appears in the June No.—viz. a view of Dr. Shelby's residence, and a portrait of one of Mr. Mark R. Cockril's Saxony bucks, both of which are well executed.

STRAWBERRIES WINTER KILLED.—The Boston Cultivator states the past winter has been very destructive to strawberries in that vicinity. The Early Virginia (a celebrated early kind,) Hovey's Seedling, the Wood, and Methven Castle, are in some gardens nearly all killed; while the Scarlet, or Royal Scarlet, separated from the other kinds only by a path, and under the same management, are all alive and flourishing. Young plants, it is said, have endured the cold with less injury than old ones. The Royal Scarlet, which it is said has escaped injury, is spoken of as a large, valuable, and productive variety.

MASSACHUSETTS SOCIETY FOR THE PROMOTION OF AGRICULTURE.—At a meeting of this highly useful society, the oldest of the kind in the country, recently held in Boston, the following gentlemen were elected officers for the ensuing year:—John Wells, President; Peter C. Brooks, 1st Vice-President; John C. Gray, 2d do.; Abbott Lawrence, Rec. Sec.; Benjamin Guild, Assistant do.; Henry Codman, Treasurer, and Josiah Quincy, jr., Cor. Sec'y. Daniel Webster, J. C. Warren, E. Phinney, F. C. Lowell, David Sears, and W. P. Mason, Trustees.

AGRICULTURAL EDUCATION.—The late State Convention of Common School Superintendents appointed a committee to co-operate with a committee of the State Agricultural Society, for promoting the introduction of agricultural books and studies into the common schools. The Hon. John Greig of Canandaigua, is the chairman of the committee on behalf of the State Society; and we perceive the name of Gov. Seward and Lieutenant Governor Dickinson among his associates. This committee will meet at Poughkeepsie, on the second Thursday (11th day) of July. Writers on agriculture, and other friends of the the cause, may promote the object by communicating their views on the subject—in reference to the preparation of agricultural works, as well as the introduction of the matter in school exercises—under cover to the care of the Recording Secretary at Albany. The school superintendents can incidentally render an immensity of service to the cause of agriculture, by bearing its importance steadily in mind when discharging their duties among the ten thousand school districts of the State.

THE SEASON IN OHIO.—Extract of a letter from a gentleman at Zanesville, dated Juue 12:—"The season here has been remarkably favorable to vegetation, and there is much heavy wheat in the country, though there are fields greatly injured by the fly. The fruit crop is fair, and the prospect in Ohio, taken all in all, looks like any thing but starvation."

MOLES.—Many of your readers are no doubt desirous of knowing the best mode of destroying moles. The following, I have tried most successfully. Raise the skin of the heart, or soft part, of a kernel of corn with a penknife, scoop out a portion of the soft part, and fill up the vacancy with wet arsenic. Place a few of these in the tracks of the mole, and I assert his ravages are at an end.

J. BOYLE.

☞ The drawing alluded to by Mr. B., was too imperfect to admit of our using it.

DOMESTIC INDUSTRY.—The manufacturers, as well as the farmers "down east," will probably, be represented by fair specimens of their products, at the State Fair in Poughkeepsie, as well as at the several of the New-England Fairs and Cattle-Shows. We have seen a letter from SAMUEL LAWRENCE, Esq. who is largely connected in business at Boston and Lowell, saying that an assortment of goods from his establishment will be exhibited at Poughkeepsie—about fifty pieces in all. The well known fabrics of the Middlesex Mills, of which Mr. S. is agent, is a sufficient guarantee that the exhibition will be alike creditable to the enterprising proprietors and to the country. Manufacturers of all sorts of useful goods, in New-England, as well as in this state, may find the Agricultural Fairs advantageous opportunities for exhibiting the varied products of their factories and workshops—those products particularly which anywise concern the the comfort or profit of the farming community.

TO MAKE YELLOW BUTTER IN WINTER.—Put in yolk of eggs just before the butter comes, near the termination of the churning. This has been repeatedly tried, and it makes very fine sweet butter. It is kept by many as a great secret, but its great value requires publicity. B.

STURGEON.—Our friend BOTTS, of the Southern Planter says one of his friends gives the following recipe for cooking sturgeon:—"Slice the white part of a sturgeon, and pour upon it boiling water to extract the oil, then boil it hard until nearly done; put it into a stew-pan with a little water, flour, cream, butter, pepper and salt, or catsup, if you like it, and stew it well."

BACHELOR'S PUDDING.—In the same paper, "Oberlin" gives the following for making Bachelor's pudding. "Break, or grate ripe bread into new milk, and permit it to get soft before adding a good portion of boiled rice, some eggs, butter, and other condiments the taste may dictate, and sweeten with molasses."

LETTER FROM EUROPE.

We are happy to present our readers with the following interesting letter from Mr. J. P. NORTON, of whose departure from this country, we spoke in our May number; and they will be pleased to learn that it is the first of a series we have reason to expect from him during his stay in Europe.

Durham, England, June 1, 1844.

MESSRS. EDITORS:—The sight of your paper in a foreign land, has afforded me much pleasure, and I am happy to say that it does not suffer by comparison with English periodicals devoted to the same subject. It has seemed to me that a slight sketch of my first impressions of the country might perhaps be interesting to your readers. With some allowance for exaggeration after twenty-five days at sea, the country about Liverpool on the 12th of May, seemed to me perfectly charming. The grass was of the most brilliant green; the wheat in some fields was nearly a foot in height; the plowed fields were neat as gardens; trees were scattered about in sufficient numbers to vary the landscape, and the neatly trimmed hedges, in many places just bursting into bloom, completed a picture of cultivation such as I hope we shall yet boast of in America. Since that time, I have learned that all England is not in such a state of perfection. Some of the fields in the coal districts have reminded me strongly of like ones at home, always excepting the hedges, which, even if ill-trimmed, give a certain air to a field that no crooked or stump fence can do. It is much to be desired that this method of fencing may be introduced among us, though hardly to be expected where wood and stone are so abundant as in our eastern states.

The country about the city of Durham, is not as fine nor the farming as good as in many parts of England. Coal is the great production of this region, and the tall chimnies of the collieries, surrounded by black machinery for hoisting, and huge heaps of refuse coal, meet the eye in every direction. One of these pits near Sunderland is worked at the depth of about 1500 ft. below the level of the sea. As you go north to Newcastle and Shields, about fourteen miles from this place, their number increases, till, on the banks of the Tyne, the volumes of smoke poured from their chimnies, joined with that from many alkali works and furnaces, overspreads the whole country and fills the air with the odor of bituminous coal.

In the course of a visit to Hexam, Northumberland, I saw some excellent farms in the beautiful valley of Tyne. One of the best was that of Mr. Harbottle, near Hexam. He practices a five year rotation; two years in clover, cutting the first and feeding to sheep or cattle the second year; barley or oats succeed, then turneps, carrots and potatoes, or other roots, and finally wheat. He had twenty-two acres of Swedish turneps in the ground, and expected to have nearly the same quantity of white turneps and potatoes. There must have been about sixty acres of wheat, oats and barley. He keeps 12 or 14 horses at work constantly, and does his thrashing by steam. He showed a sample of last years wheat pulled from the stack, a bushel of which weighed 66 lbs. One thing is to be remarked as to his plowing; the drills for potatoes or turneps are run diagonally across the field; the plough next year is not run at right angles directly across the ridges, but at a very obtuse angle, thereby mixing the manure in each drill very completely with the soil, and causing the succeeding grain crop to come up evenly. Another advantage occurred to me, which was that in diagonal plowing the team can go nearer to the fence. The crops in this region are now suffering much from drouth, as there has been no rain for nearly four weeks, more than very slight showers.

The city of Durham is chiefly remarkable for its Cathedral and Castle, the latter now the seat of the University of Durham; the former is a truly noble building, and most interesting for its antiquity. It was founded in 1094; just 750 years ago, and its stones are worn by the feet of warriors, nobles, priests and kings, who in olden times flocked to St. Cuthbert's shrine. It looks as if another seven hundred years might pass on, without sapping its massive walls. The great central tower is 214 feet in height; the length of the chancel within, is 411 feet, and of the nave 200. Some of the pillars are 23 feet in circumference.

My next letter will be from Edinburgh, where I hope soon to be established, in the laboratory of Prof. Johnston, accomplishing the object of my visit to this country, a thorough knowledge of analytical chemistry as applied to agriculture. In compliance with your request, I shall be very happy to give you from time to time, a report of our proceedings there, and of such practical observations as I may make in excursions through the country.

JOHN P. NORTON.

STATE OF AGRICULTURE IN IRELAND.

An impression seems to prevail in this country that the distresses of Ireland, arise from over population—in other words, that the soil of that island does not, and cannot yield sufficient subsistence for the number of its inhabitants. We are satisfied that this is not the case. The miseries of the Irish people arise not from a deficiency of agricultural products, but from the inequality of their distribution. An article in the last number of the Journal of the Royal Agricultural Society, on the past and present condition of the agriculture of Ireland, by William Blacker, Esq., contains many very important facts. These facts are of the more consequence, as many of them have a direct bearing on the interests of our own country.

Mr. Blacker contrasts the present condition of Ireland with what it was about the commencement of the present century, or at the time when the celebrated Arthur Young made his tour through that country. From this it appears, that though population has greatly increased, yet production has increased in a greater ratio, and upon the whole, the condition of the people has been much ameliorated. In fact the modern agricultural improvements in some parts of Ireland, are quite astonishing. At the time of Mr. Young's tour, none of the present means of improvement—such as draining, house-feeding of stock, turneps, clover, and the cultivated grasses—were practiced; and worse management than generally prevailed, could hardly be imagined.

"The consequences," says Mr. B. "attending such a state of things could not be otherwise than most disastrous. Although the country was not one-third peopled, the miserable inhabitants year after year were exposed to all the horrors of famine, followed too generally by disease; and even in favorable seasons they were most commonly under the necessity of importing food. Contrasting the then state of Ireland, as described by Young, with its altered condition in the present day, when it maintains three times the number of inhabitants, besides exporting more food than the whole of the island produced in those times; and comparing also the general state of its present population with what it was then, they being beyond all contradiction better fed, better clothed, and better housed now than was then the case; it seems impossible to deny that, as population increases, the condition of society improves, notwithstanding all that may be said to the contrary: and the truth of this not only appears on a comparison of the general state of the country now with what it was many years back, but it also appears by a comparison between the state of the east and west of the kingdom at this present moment. In the west and south-west the population is small, and exhibits every appearance of poverty and destitution; whereas in the east and north-east, where the population is great, they are *comparatively* in the enjoyment of all the comforts of life. One cannot help being struck with the positive contradiction which these simple facts give to all the assertions of those who argue that the misery to be met with in Ireland is brought on by *over* population. The misery is to be met with, generally speaking, where the population is thinnest; and the least of it is to be seen where the population is greatest. The question may naturally here be asked—How can this be accounted for? The answer is plain. The misery is occasioned not by the excess of the population in pro-

portion to the capabilities of the soil, but to the deficiency of employment."

Mr. Blacker next makes some very proper remarks on the duty of governments to encourage the employment of its own population.

The exports of grain from Ireland for several years past, have been great—the average for the last thirteen years amounting to more than one half of all the imports into Great Britain. This will be seen by the following table.

*An account of the Corn, Grain, and Flour, imported into Great Britain in each year, from 1st Jan. 1830 to 1843.**

Year.	Imported from Ireland: Qrs.	Total Imported: Qrs.
1830	2,215,521	4,650,567
1831	2,429,182	5,971,182
1832	2,990,767	3,788,665
1833	2,737,441	3,191,710
1834	2,792,668	3,351,558
1835	2,679,438	3,000,613
1836	2,958,272	3,601,865
1837	1,030,293	4,356,223
1838	3,474,302	5,009,031
1839	2,243,151	6,831,249
1840	2,327,782	6,318,304
1841	2,856,525	6,542,406
1842	2,083,660	5,806,697
1843	2,721,400	4,167,823
	35-639-332	66,588,023

Ireland contains about fifteen millions of acres under cultivation—only four millions more than the state of New-York—yet Ireland, with a population of about ten millions, exports annually more grain than the whole territory of the United States.

From government surveys lately made in Ireland, it is stated there is yet remaining five millions of acres, unimproved, capable of profitable cultivation. It is also stated there are fifteen millions of acres of a similar character in England and Scotland; so that it cannot be supposed that those countries, notwithstanding the vast advances they have lately made in agricultural improvement, are as yet anywhere near the highest limit of production. Is it not, therefore, unwise to look to England with the expectation of finding there a market for our surplus farm products?

NOTES OF A WESTERN TOUR.

We have received from Mr. JAMES WILEY, of Bedford, Pa., some account of a journey from Pittsburgh by way of the Ohio and Mississippi rivers to St. Louis, thence to Chicago, and by way of the lakes to Cleveland, &c. Want of space prevents our giving the communication in detail.

In speaking of Cincinnati, the writer says it is one of the prettiest and most orderly cities he ever saw. The draymen, butchers, &c. are better dressed than the same class he has seen anywhere else. "In short," he says, "everybody and everything, even the hogs and dogs, about the city, looked well." He saw no indications of *mobs* or anything of the kind. At Louisville, he saw the celebrated Kentucky giant, whom he says is "*a very quiet-looking man*"—a description which we have no doubt is quite as graphical as that given of the same personage by Charles Dickens. He found St. Louis a very flourishing place, and he thinks it is destined to become one of the largest cities in the world; but the appearance of the city is not agreeable, and the market places, &c. were very dirty, and in respect to order and neatness, contrasts very unfavorably with Cincinnati. The American bottom, opposite St. Louis, on the Illinois side of the Mississippi, is spoken of as being "the finest land in the world, and the most unhealthy. He says there are many people settling there, but if the land was ten times as good, he would not go to "this *death pot*."

Of Alton, Mr. W. says he hopes those who have occasion to mention it, "will remember the mob-n. ument raised to its disgrace."

About Jacksonville, he saw many good things. "Good churches, good schools, good farms, and some good Durham cattle. From Jacksonville to Springfield, is a beautiful country—much open prairie, and thousands of horses, cattle, mules, &c., feeding." Being in the neighborhood of Springfield the day before the cattle show holden at that place, he saw some good cattle and sheep. Springfield is described as being located in a beautiful prairie, the land being excellent, &c. The country on the Sangamon river is spoken of as being "settled by persons apparently not much accustomed to agriculture—at least on any improved system." The farmers have not yet introduced the cultivated grasses, except in a few instances on a very small scale. He called on one farmer who had resided there sixteen years. He had a few yards of blue grass in front of his house, but he was not much disposed to encourage the growth of this "new thing."

Peoria is mentioned as a beautiful place, rapidly improving, &c. The country on the Rock and Fox rivers, is spoken of as being very fine—good for sheep, &c. Chicago is represented as a very thriving city, doing a great business. It is the depot for an immense wheat-growing region. The husbandry through a considerable portion of Illinois is described as being very bad. The weeds were growing, says Mr. W., as "if they were contending for a premium." But on the whole he thinks there is a spirit of improvement being diffused, which will ultimately be productive of much good.

KENRICK'S AMERICAN ORCHARDIST.

The great demand for this standard work, having nearly exhausted the former editions, a new one, making the *seventh*, has been lately issued. We have no doubt that Mr. Kenrick's work is in many respects superior to any one of the kind ever published in this country, and in fact, none has been received with such favor. Mr. K. informs us that the present edition has been revised with very particular care, and many additions made to the former editions. In 1840-41-42, Mr. K. visited France and England, where he collected much information which he has here given. To the list of fruits which was before very large, he has added several new kinds which have been lately proved at the garden of the London Horticultural Society, and elsewhere in England and in France. The appendix contains excellent remarks on vegetables, ornamental trees, shrubs and flowers, &c. Published by Otis, Broaders & Co., Boston.

MACHINE FOR DRAINING.

Mr. A. Hodge, jr., of New Orleans, inquires whether there is any "Yankee invention more convenint and less weighty" than the English drain plows. We are not informed of any implement invented for this puprose in this country, excepting the one spoken of in the late report of the Commissioner of Patents referred to in our June number, p. 179. Perhaps Mr. Ellsworth may be in possession of some particulars in relation to the machine which are not made public in his report. We find descriptions of several machines or draining plows in various English works, but they all require great strength of team to work them, and we are unable to say whether they would in this country be found useful. If any of our correspondents can throw any light on the subject of Mr. H.'s inquiry, we shall feel obliged.

The *mummy* or Egyptian wheat, has proved unprofitable, as far as we know. It does not become readily acclimated, and at best it makes only an inferior flour. It is of the *many headed* variety (*Triticum compostium,*) as is all the wheat we have known brought from Egypt. The *wild-goose* wheat, and the "*California,*" which at the south attracted so much attention a few years ago, are merely different names for the same variety.

Onondaga County Cattle Show at Syracuse, on the 2d and 3d days of October next

* *Note.* A *quarter* is 8 bushels, grain measure. The *Imperial* bushel of wheat is 70 pounds—the standard bushel of wheat in this country, is 60 pounds—thus, a *quarter* of wheat is 560 pounds, or 9 and a third American bushels.

HILLING POTATOES.

Several years ago we made an experiment to ascertain whether hilling potatoes was of any advantage. We left two rows with the ground level—those on each side were hilled in the usual mode. At harvest time it was found by careful measurement, that the two rows left level, yielded most—how much most we have forgotten. Since that time we never "hill up" potatoes, unless the ground is too wet and we want to turn off the water. An inch or two of earth over the tubers will keep the sun from injuring them, and that is all that is needed. We see some one who signs "An Old Farmer," gives the result of an experiment of this nature in the N. E. Farmer. He left two rows in the piece unhilled—or only gave them a little earth at the first hoeing. At harvest he measured the product of the two unhilled rows, as well as that of two rows on each side, and the unhilled rows gave *five pecks* more (and larger potatoes) than either two of the other rows. He argues (and reasonably) that by hilling we deprive the crop of the benefits of moisture. He says potatoes need a mellow soil, but this cannot be well secured by increasing the size of the hill *after* planting. A correspondent of the London Gardener's Chronicle says, "moulding up potatoes retards the formation of the tubers." The editor of that publication doubts the conclusion of his correspondent, and says—"Potatoes are stunted and swollen branches proceeding from the sides of the main stems, which alone rise into the air, clothe themselves with leaves, and so convey their food to their underground progeny. * * * Now the quantity of lateral branches will be in proportion to the quantity of earth through which the stem passes; tubers are lateral branches, and therefore the quantity of tubers will be regulated by the same cause. Moulding up is a contrivance to increase the quantity of earth through which the main stems have to pass, and should, therefore, according to the theory, be a beneficial operation."

Now we do not understand how it is that "potatoes are stunted and swollen branches," &c. We believe that potatoes proceed from a class of roots or stems entirely different from others, and designed particularly for the production of tubers. In the next place the editor contends that as "moulding up" increases the number of lateral branches, the quantity of potatoes would also be increased by the same means. Our experience has taught us a somewhat different conclusion. We admit that the large quantity of earth through which the main stem passes has a tendency to increase the number of lateral branches, but we have *not* found this increase of branches or roots accompanied by a corresponding increase in the weight or yield of potatoes. In other words, we have found earthing or "moulding" up, to increase the number of roots, and the *number* of tubers, but not the yield either in weight or measure, because they were "*small* potatoes." We have also noticed that those varieties which throw out a great number of lateral branches, produce many tubers in number, but few in the aggregate weight.

The editor speaks of potatoes being produced in the dark which formed all over the branches, of which he gives an engraving. We have often seen potatoes produced in this way—have found them very numerous, but never knew any but small sized ones grown in such circumstances.

CARBON CONSUMED BY ANIMALS.

Most farmers have noticed the greater quantity of food required by animals when exposed to a cold atmosphere, than when placed in one of moderate temperature. The true reason for this is, that *carbon* is as necessary for the support of animal life and heat, as for the support of flame, and the quantity of carbonaceous food which the animals require, will always be in proportion to the degree of cold to which they are exposed. We find this principle well illustrated in some remarks made by Mr. Nesbit in a late speech before an agricultural association in England. The same amount of heat is said to be generated by the combustion of a pound of charcoal, whether it is rapidly consumed in oxygen, or by ordinary burning, as in the lungs of animals. A pound of charcoal if made to give off an intense heat, might be consumed in one minute, while in the breathing of an animal a pound of charcoal would generally be consumed in twenty-four hours. From this it is easy to understand how the Esquimaux are able to eat eight or ten pounds of whale blubber, and drink a gallon or two of train-oil per day. A large amount of carbon is consumed in that cold climate in keeping up the animal heat of the body, which must be supplied by large quantities of food which contains carbon. In a warm climate proportionably less carbon is consumed in keeping up the animal heat, and less carbonaceous food is required. These facts should teach the necessity of keeping animals warm in winter.

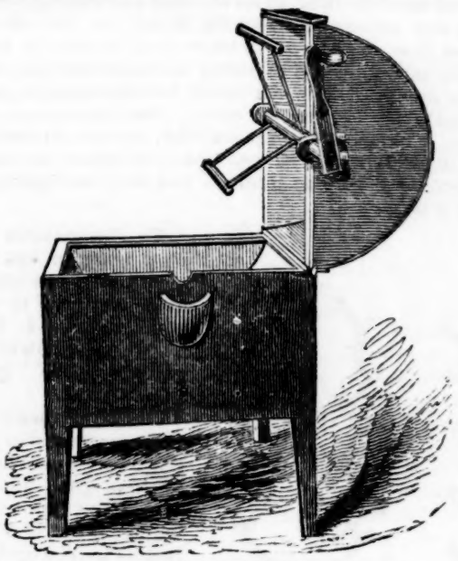
INSECT IN GRASS.

At one of the agricultural meetings in Albany, last winter, Hon. Mr. Rhoades observed that an insect similar to that found in wheat, sometimes called the *weevil*, had been seen in grass. We have this season discovered in the spear-grass, or Kentucky blue-grass, (*Poa pratensis*,) what we suppose to be the insect referred to. It is not, however, of the same class as the wheat insect—it more nearly resembles in character the *spindle worm* of Indian corn, classed by Dr. Harris under the name *Nonagriadæ*. The insect, in the larvæ state, may be found around the stem of the grass above the upper joint. It is so small that it is not readily seen by the naked eye, except when nearly full grown. We have not yet discovered it in the perfect or fly state. The period of its attack on the grass, is soon after the head makes its appearance, and (judging from what we have this year seen) continues but a few days—their ravages having ceased before the grass comes into bloom. The effects of the insect are easily seen by the dead grass. The egg from which it proceeds, seems to be deposited between the stem and leaf, (or sheath,) and the larvæ preys on the juices and tender part of the stem, which soon causes it to die and turn white down to the first joint. We have noticed on some fields where the kind of grass mentioned prevails, that nearly all the heads were dead. We have not seen it on any other kinds of grass than that mentioned. We should not suppose that it would occasion much damage, as it only attacks the stalk in the manner described, and the variety of grass to which it seems to be confined is chiefly valued for its *leaves*, which are not injured, and probably not lessened in quantity.

BERKSHIRE AND SAND-HILL HOGS.—A writer in the Southern Planter, objects to the Berkshire, and what he calls "*No-bone*" (China) hogs, that they have too short legs, too large a body, and too little ability to get their food. He says, "give me something of the South Carolina Sand-Hill hog, a hearing ear, (at least in acorn time,) a light body and long legs, then a good range, and I will ensure meat enough."

These objections remind us of a similar one we heard from a large farmer at the west. Neighbor C. was recommending to neighbor A., the improved breeds of swine. Their propensity to fatten, the fine quality of their flesh and their quiet dispositions, were highly extolled. A. listened to the eulogium for a while with silent attention, when accosting C., he said, "but can your new breed run well?" "Oh no," said C., "they can hardly run at all." "Well then," rejoined A., "I don't want any of 'em, for I intend my hogs shall get their living *somehow, and I would'nt give a cent for one that could'nt out-run a dog.*" To those farmers who want hogs to "cut their own fodder," we say, take the "long legs and light body." Then "with a good range," (and they will scarcely permit you to set bounds to their "range,") you may have plenty of hogs and a *little* "*meat*" (not *pork*,) provided you can catch it.

DAMP BEDS AND CATCHING COLD.—Visitors are often lodged in beds not in common use, and which have as a consequence, contracted a dampness, causing dangerous colds. To prevent completely this disaster, spread a well aired blanket on the bed-tick, and the sheets over it.



GALT'S CHURN.

This is one of the best churns ever made. Any quantity of butter, from one pound to twenty-five pounds, can be churned at one time. It works easily, without wasting any cream, is easily cleaned, is very durable, and brings the butter in a short time.

Manufactured by R. Sinclair, Jr. & Co., Baltimore, and also by the principal implement establishments at Boston.

EFFECT OF DROUTH ON THE MATURITY OF PLANTS.

The last year was remarkable for its unusual high temperature, particularly the months of August and September, and scarcely less so for the want of rain which had been experienced in many sections of the country. The spring months were cold and vegetation backward. Planting was of course late, and the planted crops did not come forward as rapidly as seemed necessary to ensure perfection. This was especially the case with corn and potatoes. In July the temperature changed: from being wet and cool, it became dry and hot, and in some places this dryness became a drouth of great severity. During the early part of the hot weather, planted crops grew with rapidity, but the want of rain soon checked the growth, and for a month or more the plants seemed nearly stationary. In some places the potato stopped growing, the vine died, and the appearance of a mature plant was exhibited; but the root showed that the suspension of the growth, had at the same time checked the approach to maturity, and though the vine might be dry and dead, the root remained green and immature. We had a field of some twenty acres of corn, that was just beginning to silk at the time the drouth set in most severely. For nearly a month there was not a day, except one or two on which slight showers occurred, in which the leaves of the corn did not curl from the heat more or less. During this time ears set, the corn silked, but the kernel did not form, and more than double the usual time elapsed between the throwing out of the silk and the having ears fit for roasting, that usually does. It became evident that unless the month of September was unusually favorable the crop of corn would be small, and its safety from frost much endangered. Fortunately our fears in that respect were unfounded; that month was favorable, our corn the first of October was untouched by the frost, and an average crop of full sound corn was secured.

From our experience and observation, however, we are convinced that plants make very little approach to maturity or ripening, no matter what may be the temperature, unless a plentiful supply of water be present at the same time. Heat and moisture are the indispensable conditions of the growth and maturity of plants, and either, alone, will be found ineffectual or destructive. The rains of September aided the ripening of potatoes where the vines had not dried up; but where this took place during the drouth, they proved watery and immature. We are certain the ripening of corn and potatoes was delayed some three weeks at least, on our farm by the drouth; and nothing but the favorable weather of September, and their exemption from the frosts so general in the northern states, gave them their chance for maturity.

Since the above was written, we have noticed a paper from a correspondent of an eastern paper, in which the same views are taken of this matter that we have expressed. The writer says,—"My early potatoes which were planted and up in good season, were not riper, if so ripe, Aug. 30, as they have generally averaged in favorable seasons at the 30th of July. My corn was likewise nearly a month behind its growth, and so of most other vegetables we harvest in the fall, and it appears that vegetables which do not require but four months in favorable seasons to come to maturity, will this year require nearly five; and it is not because we have not had a sufficiency of sunshine and heat, for I think we have had a fair average compared with seasons in past years."

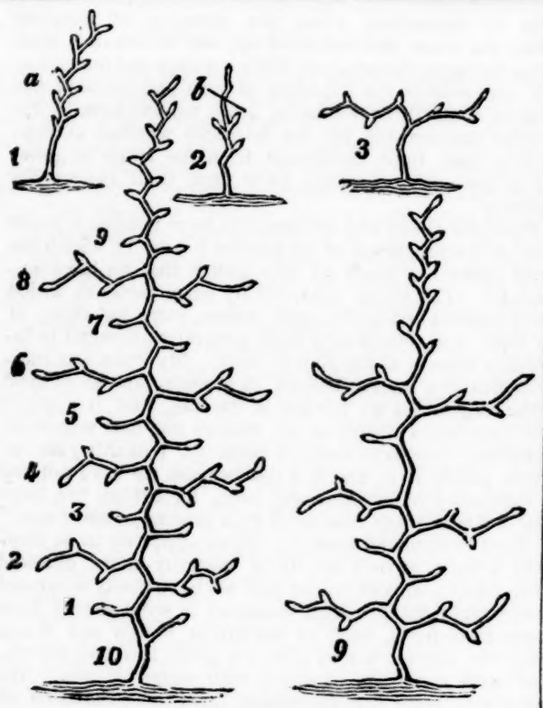
Next to corn and potatoes, apples appeared to be stopped in their growth and their maturity more checked than other plants or fruits; and we have rarely witnessed more rapid changes than occurred in what should have been early fruits, such as the Sweet Bough and White Harvest apples, where after the great heat and drouth, the earth was again saturated with water by rain. We have seen some curious results from this suspension of growth in the potato. Where rains supervened, shoots put out from the tubers of those vines longest dead, as they would from roots planted in the spring.

EARLY SEEDLING PEARS.

There is an impression abroad which has had a great tendency to prevent the general introduction of that excellent fruit, the pear, and that is, that the man who plants the young tree, must be fortunate indeed if he lives to partake of the fruit. That this impression is a mistaken one is evident from the experiments of Van Mons, who has grown thousands if not millions of pears from the seed to fruiting in from six to eight years, and in many instances in even much less time. His object has been by cross impregnation to produce new and finer varieties, and early fruiting was essential to the success of this plan. The result is well known to every orchardist and fruit grower in the country, in the rich fruits he has produced, and distributed to every part of the world. We find in the New Gen. Farmer, a proof that such early fruiting is not confined to the old world. At the last Agricultural Fair at Canandaigua, a basket of beautiful pears were exhibited, *raised from seed, and the tree only four years old.* Four years since the grower, John Crofoot, took a fine pear of the variety called Catherine, and planted it entire in a rich spot in his garden. Several young trees came up from it, and grew vigorously. Taking some leaves from the parent fruit, he selected the shoot most resembling the original, and pulled the others. Stimulating manures were applied to the tree, and it grew vigorously. Last year, being four years old, and about six feet high, it blossomed finely, and produced about two dozen of beautiful pears, more resembling the St. Germains than the Caterine, and equal if not superior to the latter fruit. This is certainly a remarkable instance of precocity in a pear tree, and should induce further attempts at this kind of culture.

CROPS IN N. CAROLINA.—From a letter to the editors, dated Red House, May 25—"The crops of corn, wheat and oats, were never more promising. We have had the earliest spring ever known in this region of country. This section is adapted to the culture of corn, wheat, oats, cotton and tobacco. The corn and wheat crops are very forward. Some of our farmers are now preparing to cut wheat, and will be in the midst of harvest next week."

TO PRESERVE IRON FROM RUST.—Heat the iron to redness, just perceptible in the dark, then cool it in tallow.



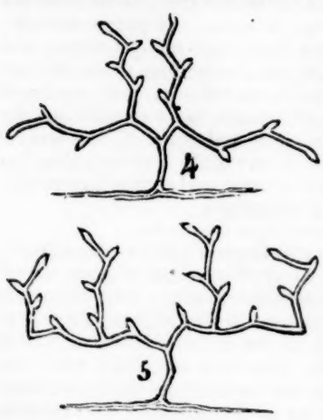
GRAPE CULTURE.

From Wilson's Economy of the Kitchen Garden, we take the following directions for the training of the grape vine. The first is calculated for a scale where the plant is to cover a space eight feet in width, and of any height from eight to eighteen feet or more.

No. 1 on the plate is a representation of the plant when set out, of one year's growth from the cutting, and is to be cut off to one good bud, as at *a*. The lower bud is seldom counted, and only the upper bud is to be allowed to produce one shoot; the young buds on this shoot will many of them shoot out in the course of the summer which should be pinched off.

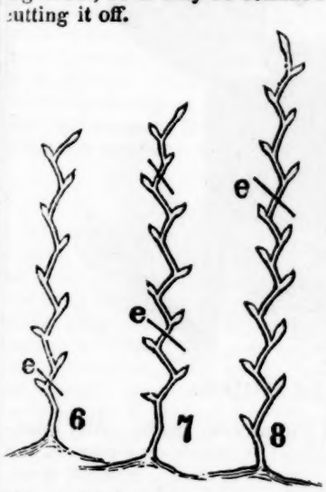
No. 2 represents the plant of one shoot, one year after being planted, and is to be cut down to two good buds, as at *b*, about fifteen or eighteen inches high from the ground. The shoots from these two buds are to be trained to a trellis, horizontally, to a distance of four feet, and then their ends pinched off, as we intend the plant to fill a space in width of eight feet.

No. 3 represents the plant two years after setting out, with the two last year's horizontal shoots as they must be cut into three good buds. The two buds next to the stem, are to be allowed to shoot and grow upright as high as they please, to be tied up to the trellis, and the end buds to be trained horizontally, to the limits of three or four feet distance, and again pinched off.



No. 4 represents the plant three years from setting out with its two last year's upright shoots, as they must be cut down to four good buds, which are this year to bear fruit, and the horizontal cut into three good buds; their shoots are all to be trained upright, which will complete the head of your vine with eight branches at about one foot apart.

No. 5 represents the vine four years after setting out, with the two centre branches that bore fruit last year, as they must be cut down near to their origin. The two next cut down to four buds for bearing fruit. The next two to one good bud, for producing one good wood shoot. The next and last two, to three buds for bearing fruit. Its regular culture, afterwards, is to cut four of the branches low down, and to leave four longer to bear fruit alternately, always allowing the branches that bear fruit the one year, to be cut down, for recovering a good shoot again for bearing the next. The other mode of training, is called horizontal training, but may be extended to any height or distance, so as you retain the leading shoot, or it may be confined to a very low space by cutting it off.



No. 6 represents the plant when set out, the same age as the other; to be cut also to one good bud, as at *e*. This bud to be allowed to produce one good shoot.

No. 7 represents the plant one year after setting out, to be cut down to three good buds as at *e*. The shoot from the upper one of which is to be trained upright, and the two lower ones to be trained horizontally.

No. 8 represents the plant two years from setting out, the leading shoot of which is to be cut down to nine buds as at *e*. The upper bud to be allowed to shoot upright, and all the others horizontally; four feet from each side. The two last year's horizontal, cut as they must be to one good bud, its shoots to be trained as it was last year.

No. 9 represents the plant three years after setting out, with its branches cut as they must be. The two lower ones to three good buds for bearing fruit. The next two cut to one good bud for wood. The next two, to three for fruit. The next two, to one. The other two to three, and the leading one again to nine. The upper bud to have its shoots continue upright—the other eight horizontally.

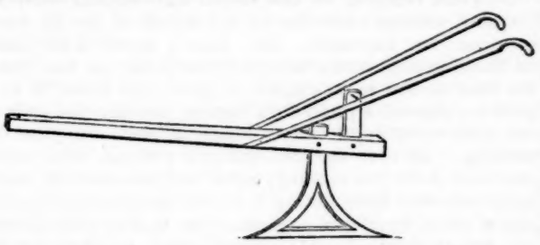
No. 10 represents the plant four years from setting out, with its branches cut as they must be. The lower two, to one good bud; the second two, to three buds; the third two to one; the fourth two to three; the fifth two to one; the sixth two to three; the seventh two to one; the eighth two to three; the ninth two to one, and the leading shoot to nine buds, all to be managed in the same way as last year. And in this way you may continue your plant as far as there is room; when that is terminated, cut off your leading shoot, and regulate all the horizontal branches so that they may bear fruit and wood alternately to the end of the grape vine's existence.

It may be necessary to observe, that in the first mode described for training the vine, the two horizontal branches or arms to support the upright shoots, are intended to extend four feet from each side of the main stem, and on each of them are to be selected four upright branches which will make them about a foot apart. It will be necessary to rub off any intermediate buds, so as to regulate them, to be placed at proportionate distances. And after they are once cut down to one bud, the next year's cutting down would be a joint higher, and this may safely be allowed for a year or two; but whenever they get too far above the arms, by cutting down to the lowermost new bud, they must be cut down on the old wood near to their origin, and only one good shoot allowed to grow; any other bud to be rubbed off. And the same rule must be observed in cutting all those trained on a horizontal plan. In directing vine buds to be left on the leading shoot, it is only intended in case the plant be very strong and vigorous; should it not be so, it would be better to cut it to five, or even to three buds; in which case there would be only one or two branches on each side instead of four, as exhibited in the plate; and the choice of numbers should always be regulated by the strength and condition of the vine.

Out of every thousand men, twenty-eight die annually.

IMPLEMENTS FOR CULTIVATING CORN AND OTHER CROPS.

Corn-ground should be kept light. In some instances the soil is not naturally too heavy, and where this is the case, the use of some implement that will merely cut up the weeds, seems all that is necessary in cultivating the crop. A light harrow and cultivator are perhaps as good implements as can be used. But where the ground gets too compact, something is required to loosen it, and give the roots a chance to penetrate and obtain the substances necessary for the growth of the plant. The common plow, though much used, we think is not the right kind of a tool for this business. It throws the soil too much into ridges, and instead of loosening, its pressure leaves the substratum heavier than it was before. We Yankees, generally suppose ourselves in advance of others in the proper construction and use of implements of husbandry; but in the use of the right kind of implements for cultivating Indian corn, the south and west are ahead of us. They use a coulter, a shovel plow, and a cultivator, according as either is most suitable. The coulter is a simple, but very effective implement, particularly useful in securing deep tillage, which is effected without disturbing the growing crop, or inverting the surface soil, which is a great security against drouth. The implement is sometimes made with two points, as in the



annexed cut. The late Hon. James M. Garnet of Essex county, Va., highly recommended this tool for cultivating corn, and gave the following directions for making such an one as is here represented:

"The lower part is made out of inch square iron, flattened and well-steeled at the points, and is twenty-two inches long. The upright part is of bar-iron, about three inches wide by five-eighths thick, and should be eighteen inches high from the top of the bottom of the square bar. The front and hinder edge of the upright should be left square, as it is much easier to break, than to cut a root with a coulter. A half inch screw-bolt will suffice to fasten the upright in the mortice through the beam, which mortice should have a strong iron plate above and below, made so exactly to fit that part of the coulter, as to keep it firm in its place. The usual pitch for the beam of a two-horse plow should be given to the beam of the coulter."

The shovel-plow consists of a beam and handles similar to that of the coulter above represented. The share is a piece of wrought iron laid with steel, somewhat resembling a round-pointed spade or shovel. The point should be drawn forward and the sides bent back so that the shape will be similar to a cultivator tooth. The share is fastened on by a screw-bolt to a piece of wood, (say 3 inches square,) morticed into the the beam. This implement, when rightly made, is very useful. It is generally made badly, which prejudices those who never saw a good one, against them. The share is commonly set too near at right angles with the beam, which prevents the tool from drawing readily into the ground, and while attached to the horse occasions it to have an unsteady, jumping motion. If the share is rightly set, it will be drawn into the ground by the natural draught, will work in any ground well, and will do better work among stumps or stones than any other implement. The share may be made of any width or size, or shares of different width may be made to fit the same woodwork, and used as needed. A wheel of proper size attached to the beam, for land not too rough, would be found an advantage in imparting steadiness of motion, and enabling the plowman to regulate the depth with more ease and precision. A good plow of this kind, although it more thoroughly loosens the soil than a common plow, yet leaves it less thrown into ridges and in better order. The best farmers pass the the cultivator through immediately after the shovel-plow, at the last time of working the corn, which leaves the ground sufficiently level.

In cultivating a crop on sward-gound, the sod ought not to be turned up the first season. Unless the furrows become run together by heavy rains, or settle down too hard, decomposition will more effectually take place, and the gases evolved will be more effectually taken up by by the crop, if the sod is left undisturbed. Should it be expedient to loosen the soil, the coulter will do it without bringing the grass to the surface, and the shovel-plow with its thin, sharp edge, will shave the furrows just as is wished without breaking them. A shovel-plow of small size may be run very close to the corn, and sufficient earth may be thrown by it to bury and kill the small weeds around the hill, without doing any hurt.

Potatoes need a little earth thrown around them—just enough to keep the sun and air from injuring the tubers. The cultivator and shovel-plow will generally do the work right.

For turneps, beets, &c., some tool is wanted that will cut the ground fine and kill the weeds, and at the same time run near the plants without doing harm. It must not throw the earth towards the plants because while they are small a slight burying will kill them. A frame like a cultivator with sharp harrow-teeth, and strong but sharp knives, turned in, will cut every thing close up to the plants.

In cultivating all crops, it should be made a primary object to keep down the weeds from the outset—they should not be allowed to get the least headway. The harrow, cultivator or plow, should be kept constantly moving, and by due attention to this, the use of the hoe or hand-labor may be in a great degree rendered unnecessary.

Driving Horses with a Single Line.—While on the subject of cultivating corn, &c., we cannot avoid saying a word on the mode of driving horses with a single line, practiced at the south and west. Horses well broken to this mode, are much more easily governed by the driver than by the other mode. They will generally go straighter forward, and in marking out furrows for planting, or working among corn, there is no necessity of a boy to ride—a man skillful at the business will mark out his rows, for half a mile in length, as straight as if done by a line. The horse is soon habituated to the mode—he learns that a *steady pull* is intended to bring him to the *left*, and a *jerk* to incline him to the *right*.

The heavy six-horse teams to be seen on the National road, are all driven by a single line attached to the leader, or near forward horse. The off horses are coupled to the near ones. It is true horses may be so disciplined that they will go right without any line, being fully under command of the driver's voice, but they are not often found so, and for managing one horse, only, we decidedly prefer the single line instead of using double lines, or heating the horse by putting a boy on his back.

TO KILL GOPHERS, &c.

An animal by some called the gopher, a species of mole, is sometimes very troublesome in meadow grounds, by throwing up little mounds of earth, which buries and destroys the grass. We have heretofore given various modes of destroying them, one of which, with a cut of the trap, will be found at page 70 of vol. 10. A writer in the Prairie Farmer, (John Sherfry,) says he poisons them with arsenic in the following manner:—"I take a small potatoe and stick holes into it with my pocket knife or a sharp stick, and put into the holes a little arsenic; then I go where they have last been digging, and with a spade or hoe open their tunnel, and drop in the potato. I then put in a wisp of straw or grass or any thing else that will keep the ground from closing the tunnel, and cover it up with earth. Sometimes one can discover them when they have a hole open, throwing out earth; that is the best time to roll a potato in."

AGRICULTURE IN SCHOOLS.

We are nappy to perceive that the subject of introducing agricultural books into the common schools and common school libraries, is atttracting much attention, and are pleased to give the following Report submitted to the State Convention of Superintendents of schools, lately assembled at Rochester. Heretofore, little or no information on this subject has been within the reach of the youth of our country generally, and they have grown up ignorant, in too many cases, of the most common objects with which they are surrounded, and of the first principles of the art by which they are to obtain a livelihood. We have, however, no doubt, that the interest now awakened will be the means of soon bringing forward some suitable works for our schools and school libraries, which will be an important aid to a sound and useful education.

Mr. Patchin presented the following report on the subject of introducing the study of agriculture in common schools, recommending that it be frequently made the subject of school exercises, and that more agricultural works be placed in the libraries.

The committee to whom was referred the consideration of the subject of introducing the study of *agriculture* as a branch of education in our schools, respectfully report,

That, as agriculture is the art on which all other arts depend, and the profession in which the greater part of our population are engaged, its improvement and prosperity is a subject of the highest importance; and the committee are of the opinion that the time has arrived when the elements and scientific principles of agriculture should be taught in all our schools, especially to the older class of pupils.

The rapid progress which has of late years been made in those parts where the discoveries of science have been brought to bear on the improvement of agriculture, affords the strongest evidence of the importance of diffusing a knowledge of the principles upon which these improvements are based, among those who are soon to become the owners and cultivators of our naturally fertile, though much abused soil. There can be no donbt but that such knowledge, if properly imparted, would have a direct tendency to improve the practice of agriculture, and elevate the profession to that high rank in public estimation which it so justly deserves.

Your committee have perceived, however, that there are numerous difficulties connected with the subject, and that it requires more deliberate consideration than they have bestowed upon it, to devise the best means for accomplishing the object. Much can be done by the introduction of books on agriculture into the district school libraries. This object has received considerable attention from the New-York State Agricultural Society, and premiums are now offered for the best essays for the purpose. There is still wanting a suitable *text book* on agriculture, for the use of schools.

In view of this whole subject, therefore, the committee beg leave to recommend this subject to the earnest consideration of this convention, and to submit the following resolutions:

Resolved, That this convention recommend to teachers, as far as is in their power, to impart instruction on agriculture, by occasional dialogues or conversations, and the reading of agricultural books and periodicals, so as to explain the principles of this art, and show its respectability and importance to themselves and society.

Resolved, That the convention deem it of the highest importance that our school libraries contain more works on the principles and practice of agriculture, suitable for the perusal of the young; and therefore we take pleasure in recommending to the trustees of school districts under our charge to purchase works of that character.

Resolved, That we will, as county superintendents, take the subject into consideration, and be prepared, at our next annual convention, to express our opinions respecting it, and to act decisively upon it, if deemed advisable.

Resolved, That a committee of three be now appointed to take this matter under their special consideration, and report thereon at our next annual convention; and that the State Agricultural Society be requested also to appoint a committee to confer with them.

A committee of three was appointed, to take the subject into consideration, and report at the next convention.

TURNEP FLY.

The *Brassica* tribe of vegetables, (turnep, cabbage, radish, &c.) is attacked by a little black, shining beetle, to which entomologists have given the name of *Haltica*, derived from a word signifying to leap. It is sometimes called the turnep flea, sand flea, &c. The same or a very similar insect is sometimes quite destructive to cucumbers and other vines, while they are in the first leaf. In England this beetle, or flea, is called "the fly." It is the most formidable enemy to the turnep culture, and great precautions are used to guard against its ravages. In this country it also not unfrequently destroys the turnep crop, almost as soon as it makes its appearance above ground. Various remedies have been devised against it; such as sprinkling the plant with plaster, air-slacked lime, ashes, watering the plants with alkaline or fœtid solutions, &c. &c.

The best applications are undoubtedly those which most promote the growth of the plants, because as soon as they are in rough leaf, they are safe.

At a late meeting of the Royal Agricultural Society's Council, various remedies for the attack of the fly were proposed and discussed. Mr. Beard, agent to the Duke of Buckingham, mentioned an experiment he had tried. He took an old sack, ripped it open, and nailed it to a pole the size of a pitch-fork handle, leaving the ends of the pole about eight inches longer at each end than the sacking. He then smeared one side with tar, after which two men drew the sacking, tarred side downwards, regularly over the field, letting it sweep the ground at an angle of about forty-five degrees, fresh tarring with a brush as often as required. He caught great numbers of the beetles or flies, and saved the crop. He has pursued the plan for several years, and has not had occasion to plow up a single acre from the effects of the fly. He prefers gas tar, in consequence of its having a stronger scent. It is sometimes necessary to go over a field more than once, but the work can be done with great expedition.

Another gentleman spoke of his experience which had been very successful. A month before he begins to sow his turneps, he provides vessels for the reception of the seed, adding to every twenty pounds of seed, half a pint of linseed oil, taking care to have it well mixed, then adds a pound of flour of sulphur, and every morning has the whole rubbed between the hands to get the seed in a proper state for drilling. He has practiced this mode for twenty years without a single failure.

There is also another insect which does considerable damage to turneps, radishes, &c., commonly called the *maggot*—(*Anthomyia Brassicæ*, of entomologists.)

The parent fly deposits eggs near the crown of the plants—the larvæ, as soon as hatched, make their way into the root, which they perforate in every direction, living there till full grown and ready to pass into their other stages. Whole fields of turneps and radishes are sometimes rendered worthless by them.

Kollar says—"the only way of diminishing this destructive fly is to pull up, and carry away betimes, the plants attacked by the larvæ, which may be easily discovered by their dull lead color, and the withering of their leaves in the sunshine."

AN APPLE WITHOUT SEED OR CORE.—S. W. Jewett, Esq., in a letter to the Boston Cultivator, says he has this year received some "slips," (scions we suppose,) of a kind of apple that has neither "*core nor seeds*." The fruit, he says, is only propagated near Ticonderoga, N Y. The origin of the variety is given in the following words—"The top of a young tree was bent over and covered with earth which took root; the tree was cut asunder which stopped all connexion with the natural roots of the tree, and by sprouts which sprung from the top portion of the body a regular top was formed, which produces this fine fruit, said to be a beautiful red, good size, very pleasant table apple to be used in the fall."

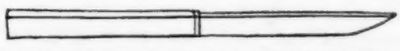
BUDDING.

The effect of propagating choice fruit about a farmer's premises, is, figuratively, to grow the rose where only grew the thorn, and literally to provide for one's family and friends, some of the choicest luxuries of life; and these luxuries far surpass those of a like kind which are purchased with money, because upon one's own trees, they may be permitted to attain their highest perfection, and because they are rendered more endearing by the personal care and labor which we bestow on their culture.

Budding has several advantages over grafting. It is more readily performed, with fewer implements, and with greater success; it does not injure the stock if unsuccessful, and the operation may be twice or thrice repeated the same year, as the season for its performance is protracted, for some one or other of the varieties, for about three months. Although July and August constitute the ordinary season for budding, the plum and the cherry may often be budded in the latter part of June, and the peach, apricot, and nectarine, as late as the middle of September. Any one may readily acquire the art under the directions we are about to give.

The first consideration is to provide stocks, if this provision has not been already made. Seeds may be collected the coming season by almost every family. Those of stone fruit may be mixed with earth or deposited in a hole in the garden, and in the autumn buried superficially to expose them to the expanding influence of the frost; and in the spring, those of the peach and plum that have not burst their shell, should be cracked and the whole thrown into a well prepared bed. Cherries may be sown immediately after they are taken from the fruit, and the apple, pear and quince in the autumn or spring. All kinds will generally grow the first season. If transplanted in June and well treated, the peach will generally do to bud in August or September following, and the others in two or three years, if put into nursery rows, and well taken care of. The rule applies to plants as animals, the better condition they are kept in while young, the more profitable they will become at maturity. No one will regret the trifling labor and attention which he has bestowed on a little plantation of this kind, after he has begun to realize the fruits from it.

A bud is an organized plant in embryo, with roots, branches and foliage, and like a seed, possesses individual vitality, capable of development and the reproduction of its species. The process of budding is the transferring this embryo plant to another tree which must be of the same genus if not of the same species. The apricot and nectarine may be and generally are budded on the peach; the plum and the peach are budded on each other, and the apple and pear may be worked on the wild crab and hawthorn—and the former is put on quince to produce dwarf trees. To render the transfer or budding successful, three things are requisite. 1. That the bud be in a proper condition to transfer. 2. That the stock be in a condition to receive and nourish it; and 3. That the transfer be skillfully made. The bud ought to be matured, of full growth, and yet not so hard as to cause injury in separating it from its parent. The stock must peel freely, as this is necessary for the insertion of the bud, and indicates the presence of what is termed the cambium, which is the soft, partially formed woody matter which underlays the bark, which ripens into indurated wood—is the source of nourishment to the bud, and is the bond of union between the bud and the stock. The operator must use caution that he does not injure either the bud, the bark, nor the cambium, as all these exercise important offices in effecting the union; and he must withal take care to apply his ligatures properly. It will be seen from these remarks, that both the stock and the graft should be in a state of active growth, and the more vigorous the better, when the budding process is performed. It is also preferable to bud when the weather is cloudy, but not wet. Twigs for budding may be preserved for many days, with care. They should be immediately divested of their leaves, but not wholly of their leaf-stocks, or petioles, to prevent the exhaustion of moisture, and may then be wrapped in fresh grass, or with their butt ends preserved in moisture.



The only implement necessary is the budding-knife, and the only preparation some bass-matting, or inner bark of the bass-wood or linden. We shall here describe only the common mode, which we take from the Encyclopedia of Gardening.

Shield-budding, or T budding, is thus performed—Fix on a smooth part of the side of the stock, rather from than towards the sun, and of a height depending, as in grafting, on whether dwarf, half, or whole standard trees are desired; then with the budding-knife, make a horizontal cut across the rind, quite through to the firm wood; from the middle of this transverse cut, make a slit downward, perpendicular, an inch or more long, going also quite through to the wood. This done, proceed with all expedition to take off a bud; holding the cutting or scion in one hand, with the thickest end outward, and with the knife in the other hand, enter it about half an inch or more below a bud, cutting nearly half way into the wood of the shoot, continuing it with one clear slanting cut, about half an inch or more above the bud, so deep as to take a part of the wood along with it, it, the whole about an inch and a half long; (*a.*) then directly with the thumb and finger or point of the knife, clip off the woody part remaining to the bud; which done, observe whether the eye or germ of the bud remains perfect; if not, and a little hole appears in that part, it is imperfect, or as gardeners express it, the bud has lost its root, and another must be procured. This done, placing the back part of the bud or shield between your lips, expeditiously with the flat haft of the knife separate the bark of the stock on each side of the perpendicular cut, clear to the wood, (*c.*) for the admission of the bud, which directly slip down, close between the wood and the bark, to the bottom of the slit, (*d.*) The next operation is to cut off the top part of the shield (*b*) even with the horizontal first made cut, in order to let it completely into its place, and to join exactly the upper edge of the shield with the transverse cut, that the descending sap may immediately enter the bark of the shield, and protrude granulated matter between it and the wood, so as to effect a living union. The parts are now to be immediately bound round with a ligament of fresh bass, (*e*) previously soaked in water to render it pliable and tough, beginning a little below the bottom of the perpendicular slit, proceeding upward closely round every part, except just round the eye of the bud, and continue it a little above the horizontal cut; not too tight, but just sufficient to keep the whole close, and exclude the air, sun and wet.

Future treatment.—In a fortnight at fartherest after budding, such as have adhered may be known by their fresh appearance at the eye; and in three weeks all those which have succeeded well will be firmly united with the stock, and the parts being somewhat swelled in some species, the bandage must be loosened, and a week or two aterwards finally removed. The shield and bud now swell in common with the other parts of the stock, and nothing more requires to be done till spring, when just before the rising of the sap, they are to be headed down close to the bud, by an oblique cut terminating about an eighth or a quarter of an inch above the shield. In some cases, however, as in grafting, a few inches of the stock is left for the first season, and the young shoot tied to it to prevent injury from the winds.

To REMOVE INK SPOTS.—Spots made by black writing ink, on the pages of a book, may be removed by washing them with a solution of oxalic acid in water. The spot must be afterwards washed with clear water. In this way the writer has easily removed fresh ink and left the page white, and old spots have been nearly obliterated.

THE "GANG SYSTEM" IN ENGLAND.

Heaven knows we have misery and degradation and vice enough in this country, and if we had been ignorant of it, the foreign travellers who traverse it, have kindly and frequently brought the fact to our notice; and so intent have our English brethren been on this, that they seem to have overlooked the misery and degradation and vice existing on every side at home. Scarcely had the public recovered from the shock produced by the vile atrocities revealed by the commissioned inquirer into the state of the laborers in the coal districts, and the unparalelled misery of the manufacturing ones, when a new source of oppression and crime was revealed in that part of the Report of the Special Poor Law Commissioners which relates to the employment of women and children in agriculture, or what is called the *Gang system* of labor. We have room for only a brief notice of the subject here; and we only allude to it, to show the condition of the agricultural laborer there, and enable the American tiller of the soil to compare the condition of his wife and children as well as his own, with those described.

The gang system originated at Castle Acre in Norfolk, several years since, and has been gradually spreading, as poverty and misery compel the agricultural districts to adopt any course that will prevent absolute starvation. The parishes around Castle Acre were in the hands of two or three proprietors, and to avoid poor rates, these men allowed the cottages on their lands to fall to decay, and refused to build new ones. The proprietors of Castle Acre on the contrary, kept up their cottages and obtained exorbitant rents by letting them to the poor laborers from the adjoining parishes. As these parishes must have laborers, they resort to those collected around Castle Acre, of which there are some two or three hundred. To facilitate business between the employer and those wanting employ, a person called a "gangsman," is employed as a middle man between the parties. The Report describes the operation of this system as follows:

"Suppose a farmer in or near Castle Acre, wishes to have a particular piece of work done which will require a number of hands, he applies to a gang master, who contracts to do the work, and furnish the labor. The bargain is made with the gang master, and he makes his bargain with the laborers. He accordingly gets together as many hands as he thinks sufficient, and sends them in a gang, under an overseer, to their place of work. If the work, as usually happens, is such that it can be done by women and children as well as men, the gang is in that case, composed of both sexes, and of all ages. They work together, the overseer taking care they are steady to their work, and checking any bad language or conduct. The overseer usually goes with them to their place of work, and returns with them when they have done for the day. One gangsman at Castle Acre has about one hundred persons in his employment, with four or five overseers."

The result of this system is easily seen, and are forcibly detailed in the Report. The gang-master for instance, engages 50 hands to pull turneps, or harvest wheat, in a field 5 miles off. On reaching the place, the weather becomes unfavorable, they cannot work, and they return without receiving any thing. Children of six years old have to walk 5, 6, or 7 miles to their work at times, and if it rains, are compelled to walk back again. To children, such walks are worse than the work. The day, for the gang, is divided into four parts, and if a laborer, man or child, fails, or rain stops him, before the part has passed, he gets nothing for it. One of the worst effects of the gang system is its moral influence on the laborers. The character of the employed is of no consequence to the gang-master, and hence, says the Report, "all sorts of characters, male and female, are mixed up in these gangs. Idle and profligate persons whom no one would employ unless they could be kept under constant superintendance, naturally find a resource in these gangs. A large proportion of the females consist of grown up girls, of whom one of the overseers stated, that in consequence of ganging, seventy out of one hundred were very imprudent, or prostitutes." As the places of work are frequently from six to ten miles distant, the gangs are sent in carts or wagons, and during their absence which is sometimes several days, sleep in barns or elsewhere, as they can, which will in part account for the gross immorality of this class of the laboring poor. Another consequence results from this system. The whole laboring population, wherever it prevails, are in the power of the gang-master, who, if he is a "hard man," and he has every temptation to be such, becomes a perfect tyrant. Were he ever so favorably disposed, he has little power to mitigate their condition; but he has the power to exact from them any amount of labor he pleases; frequently his condition is that of "a poor man who oppresseth the poor," one of the most grinding and aggravated kinds of oppression. One of the most alarming features of the case is, that the gang system is spreading and increasing; a sure proof of the deepest condition of moral and physical degradation, a condition in which a man voluntarily consigns himself, his wife and children to a state of hopeless servitude for the miserable pittance of potatoes and bacon, that will keep soul and body together. Negro slavery is an evil for which God will visit any nation; but here in the midst of a people boasting that whoever touches their soil is free, we find a deep and firmly rooted servitude, to which in its consequences, American slavery affords no parallel. That government which tolerates such a state of things, or which by its lust of power has reduced its agricultural population to such a frightful condition, must expect that the day of retribution, dark and terrible, cannot be far distant.

DAIRYING.

Experiments are being made with glass milk pans in England. It is thought by some that they will be found very excellent articles. The price, it is said, will not be high, and it is supposed that they have an advantage on account of the purity of the metal, and their being no risk of any injurious action which may injure the cream or prevent it from rising. Cheap China has been recommended and sometimes tried for milk pans. It is thought by some that milk pans should be shallow. This subject was discussed at a late agricultural meeting in England. One man stated that he believed it had been demonstrated that the same measure of milk poured into a vessel allowing it to stand two inches deep, would cast nearly twice as much cream as it would do if its depth were eight inches. Now does the experience of dairymen in this country agree with this? We should be glad to know.

At the meeting above alluded to, Mr. Greaves stated that he had found in his own dairy that a piece of saltpetre about the size of a hazel-nut, dissolved in warm water, and mixed with every gallon of new milk as soon as it is strained, not only caused the milk to cast its cream better, but had the effect of removing from the butter every disagreeable flavor arising from the herbage of particular pastures, such small addition to the milk, of so well known and simple saline substance, imparting to it a wholesome character, rather than otherwise, in a dietetic point of view.

We have seen saltpetre used in this way with good effect.

Another gentleman at this meeting spoke of the *syphon* for separating milk from cream. The syphons were made of block-tin, with a tube about a quarter of an inch bore. They are completely self-acting, merely requiring to be inserted in the milk and set at work, the stream continuing to flow by such decantation until the cream presented itself for admission into the lower orifice of the tube, when its greater body and less fluidity prevented its free passage, and the syphon gradually stopped of its own accord. This complete draining of the milk from the cream, rendered the butter very superior in its keeping properties.

SORE TEATS IN COWS.—An old receipt for this ill which the cow is heir to, is rubbing the parts affected in molasses, and we have known it to be tried in many cases with success.—*Bost. Cult.*

PRINCIPLES OF BREEDING.

At the sixth agricultural meeting in Albany last winter, the subject for discussion was the proper mode of improving the breed of domestic animals. Mr. HOWARD, associate editor of the Cultivator, made, substantially, the following observations.

Mr. H. said although he thought the remarks which had been made by the gentlemen who had before spoken, were, from their general character, highly interesting, yet he should have been pleased if something had been said having a more direct bearing on the subject under consideration.

It seems to be admitted, by most persons, that domestic animals have in some cases been improved by man, and the object, in the outset, is to ascertain *how* that improvement has been effected; because, "what man has done, man can do." What, then, has been the system pursued by the improvers of animals? Some natural principle has doubtless been acted on. In the history which has been given of the management of Bakewell, Fowler, Colling, and others, we are not informed that the constitutional qualities of their animals were changed or improved, by keeping them on any peculiar kinds of food. They, to be sure, had their animals well fed with wholesome food, adapted to their age, but no particular mode of feeding was relied on to effect a *constitutional* improvement. Nor was it supposed that those men had a very thorough knowledge of the phisiological principles, which had just been spoken of. In saying this, it was not intended to undervalue science, but simply to state, that with such light only as is within the reach of every man, important improvements have been made. If to the practical habits of observation which those celebrated stock-breeders possessed, had been added a thorough knowledge of anatomy and animal physiology, the results of their labors might have been still greater. But practical skill and discrimination, are of the first consequence, and with the men who possess these requisites, theoretical knowledge will be turned to the best account.

An attempt will be made to state, briefly, what is believed to have been the *foundation* on which Bakewell, and other improvers of stock, conducted, or continued to conduct their operations.

The best domestic animals for any particuiar purpose, are seen to possess certain natural or constitutional characteristics.

It may be said to be a law of nature applicable to the animal and vegetable world, that "*like produces like.*" This, though a truth in a *general* sense, is not strictly so in a *particular* sense—if it were, all animals of the same general family or race, would be *exactly* alike. For an illustration of this idea, suppose we take a given number of animals of any species, breed them together, and rear their progeny. We do not find an *exact* resemblance among them, nor do they exactly resemble either of the parents, or any of their progenitors. Some of the offspring may not possess as many good points as their progenitors had, and occasionally some may be found with more. There is a variation, but still there is a general resemblance. Now if we select from the offspring of our first named animals, some which are actually better than their progenitors, and breed from them, always bestowing proper attention, we may have some among *their* progeny also, which will exhibit the same superiority over the parents that was mentioned in the first instance. If we select the best from these again, and go on as before, we obtain the same results—we may still have a few superior ones—and thus by attending for many generations to these rules in selecting, a general, fixed and permanent improvement is effected.

But it should not be supposed that the superiority of offspring to parents, which has been spoken of, is frequently to be expected; on the contrary, such superiority is rare, especially in those breeds which have derived their excellence chiefly from the art of man—in such cases a progeny is more likely to be inferior to its progenitors, than superior—nevertheless, that superiority is sometimes found; and experience has proved that if such animals as possess it are chosen for propagation, those superior points, though in their first development they may seem to have been only an accidental deviation from general laws, may be perpetuated in the future progeny—may be transfused through a larger number of animals, and other improvements added in succeeding generations.

The principle then is this—that *like begets like* in a *general* sense—that there are some variations within this rule, which, when seized on, constitute the basis, under proper management, of new and improved varieties. That particular qualities in animals, though apparently accidental at first, may become fixed and hereditary, (coming under the general principle that like begets like,) by the exercise of care and skill in selection and breeding.

It is by having acted on this principle, that improvement in breeding domestic animals has been chiefly effected.

But it is impossible to lay down rules for selecting and breeding, so minutely that they will infallibly lead every one who undertakes to follow them, to the desired point of improvement. To be able to select the best animals for particular purposes, requires a nicety of discrimination which can only be acquired by a long course of the closest observation, and a habit of comparing different animals, united with a natural taste for the subject and a thorough understanding of its principles. Such is the attention, study and observation, that is necessary to constitute a successful breeder, that few men have hitherto been able to secure that title, and until men are much altered, it will continue to be so in future. It is an easy matter to improve an inferior stock by crossing it with a superior one; but when there is no longer a superior stock to resort to for crossing, there will be found but few who will be able to push improvement any further. And this will always render the number of *truly fine* animals, comparatively small, and as a natural consequence, the prices they will command, will be comparatively high.

It is believed that the principle here laid down, is the one which has been acted on in breeding, whether improvement has been sought by crossing distinct breeds and rearing a new one from the issue, or by breeding entirely from one variety. It is this principle which constituted the basis of the improvements effected in the Long Horn cattle by Bakewell and Fowler, in the Short Horns by Colling and his coadjutors, in the Herefords by Price, Tompkins and others. It has also been equally the basis of improvement in sheep-breeding, from the Leicesters of Bakewell down to the South Downs of Ellman and Webb, and the Anglo Merinoes of Lord Western. *Proper selection* is the grand point, and, with a sufficient range for this, with due care in feeding, &c., in proportion to the skill and judgment of the breeder in discovering the excellencies and defects of animals for particular purposes, so will be his success in attaining the points of improvement at which he aims. Every thing depends on the faculty of the breeder to select those animals for propagation which are best calculated to promote his object.

It may not be improper to make a remark here in relation to certain modes of breeding, in reference to which much has been said and written.

Breeding from animals of near relationship, commonly called *in and in* breeding, is generally considered injudicious. On the other hand, crossing two distinct races, whose characteristics present a wide contrast, is by some considered equally impolitic.

Breeding *directly* in and in, or from *precisely* the same blood, is not, probably, often practiced by professional breeders. It is usually admitted that Bakewell practiced very *close* breeding, if, indeed, he did not breed from precisely the *same* blood, with both cattle and sheep. And yet his stock not only improved in symmetry and tendency to fatten, but in constitution also.* It is true

* "The principle which he [Bakewell] invariably adopted was, to select the best beast that would weigh most in the valuable joints; so that while he gained in point of shape, he also acquired a more *hardy breed*, and especially by attending to the kindliness of their skins, he became possessed of a race, which was more easily fed and fattened than any other."—[Complete Grazier, p. 34.]

that after his death the stock declined, but under the guidance of his master mind, no degeneracy was indicated. He made such selections of animals for breeders, in the beginning, as suited his judgment, but afterwards confined himself to his own stock; but it has been observed that his stock was so large as to furnish unusual facilities.

Crossing long-wooled with short-wooled sheep, and breeding from the issue, is commonly considered injudicious, and in general the plan does not succeed, yet examples may be cited to show that great success has sometimes followed its adoption.

Mr. Twynam, of the county of Hants, Eng., has for twelve or fourteen years been engaged in breeding a race of sheep from an original cross of the Cotswold and South Down. His sheep sustain a very high character, and he has carried many prizes on them. Count de Gourcy, in the account of his late tour through England and Scotland, speaks of them in the highest terms, both those which he saw in the possession of Mr. Twynam, and of the same stock which he saw on the pattern farm of Lord Ducie, under the direction of Mr. Morton. The Count states that Mr. Twynam has for a few years past, sold many of his sheep to be sent to Australia, India, &c.*

Another striking example is that of the Anglo Merino sheep of Lord Western. He commenced his experiments about the year 1812, with some sheep presented him by George III., which that monarch had received from Spain. The peculiar race to which he has given the name of Anglo Merino, were produced by a cross of the Spanish with the English long-wooled sheep—the object of Lord Western being, as he has declared, the production of a Merino fleece on a Leicester carcass. His first crosses were with the Leicesters, and afterwards with the Cotswolds and the Kent long-wooled sheep. His success, up to this time, has been very satisfactory. He has obtained a carcass weighing at two years old from a hundred and twenty to a hundred and thirty-five pounds nett, selling at a high price to the butchers, and has obtained at the same time a fleece averaging nearly six pounds of washed wool, commanding a price in market nearly equal to full blood Merino. His flock of breeding ewes, of the cross-bred stock, is about eighty in number.

It is not now intended to *recommend* these modes of breeding, but to show from these examples, (and others might be given,) that men who thoroughly understand the business, with a sufficient range for selection, may effect improvement by either of them. But the breeder must not be confined to too small a number of animals—he should have so many to choose from that there may be an opportunity of obtaining the points he wishes for, without concomitant defects. Range for selection is very important, and much disappointment has frequently been experienced from inattention to this particular. Some seem to have an idea that to obtain a superior stock it is only necessary to procure a single pair of animals of the breed desired, and leave them to an indiscriminate copulation. The expectations of farmers are often highly raised from the circumstance of a few improved animals being brought into their neighborhood, and it appears to be supposed that in the course of a few generations their whole stock will possess the blood and perfections of the new breed. These expectations are seldom realized. From the limited chance for selection, animals having the same defects are permitted to breed together, and the consequence is that these defects become more and more conspicuous with every generation, so long as the injudicious course is followed, the stock degenerates and dwindles away to worthlessness, perhaps, even before the sanguine, but dull-sighted owner is aware of it. This consequence may perhaps follow sooner where stock is bred from close affinities of blood, but if the selection of breeders is confined to the progeny of only two or three animals, it is almost impossible to avoid degeneracy.

It is often remarked that high bred animals, as they are called, (or perhaps we should say high-bred *fattening* animals,) do not breed readily. In animals of this character, a sort of artificial temperament or constitution seems to take place—a change somewhat analogous to that which not unfrequently occurs in plants. An extraordinary development of one class of organs is frequently attended with a greater or less defect in other organs. Strawberries and other fruits, of a size much greater than is common with the species, are sometimes produced. But they are generally much less prolific than other kinds which show no extraordinary departure from the original or natural characteristics of the race. The flowers of some plants by cultivation become *double*. In this case, the stamens, or one portion of the procreative organs, are converted into petals—the plants become *monsters;* and are either totally barren or produce only a small quantity of imperfect seed. So with certain animals, cultivation has partially changed their constitution—their procreative faculties are weakened—the energies of the organs of generation become as it were swallowed up by the fat-secreting organs—and the animal is either incapable of propagation, or begets only a feeble progeny.*

The skillful breeder will be always on his guard against this defect, or *monstrosity*—he will take care that no one property is cultivated to the sacrifice or injury of any other essential one—he will not encourage the fat-forming organs to such a degree that the generating organs of his animals become weakened, and consequently the constitutions of their offspring impaired. Vigorous and energetic animals should always be chosen for propagation—and the ultimate success of those breeders will be greatest, who pay due regard to the proper balance of the animal system.

In reply to an inquiry by Professor Emmons, "which of the parents has most influence on the progeny?" Mr. Howard said—that was a question on which even "doctors disagree." Some few years ago, the Rev. Henry Berry, of England, wrote a prize essay on this very question, and the ground he took was, that where both parents are equal in strength or purity of blood, the influence of each on the progeny is equal.

It is, however, reasonable to suppose, that in some respects this influence of the parents cannot be equal; and that the theory is well founded that the *constitutional* qualities, nervous temperament, &c., are more likely to resemble the dam, and the *external* qualities, such as outward form, color, hair, &c., to resemble the sire. Many examples might be cited in support of this theory. Many farmers have noticed how much more likely their animals are to inherit the diseases of their dams, than their sires. When we consider that the animal is supported during the fœtal stage of its existence entirely from the blood of the mother, and that this blood, circulating through every part of the system would, of course, be affected by the state of the animal's health, this consequence would seem to be perfectly natural.

On the other hand it has been noticed that the outward features of the sire, more frequently than those of the dam, are enstamped on the progeny. This has been attributed to the nervous influence of the dam—or what is called the influence of the imagination of the dam on the fœtus. Practical men believe there is something in this. Professional breeders avail themselves of the principle in giving to their animals some desired marks or qualities. It must have been something akin to this, by the influence of which, through the medium of peeled rods, Jacob caused the cattle to be born "ringed, streaked, and speckled." Breeders of horses sometimes take great pains to operate on the imagination of the mare, and thus produce in the foal certain characteristics. At the time of conception, or within the first month afterwards, the fœtus seems to be particularly susceptible to this influence, and it is not difficult to produce the changes spoken of. Some striking instances of the effect of this sympathetic influence, might be given. One of the most remarkable, perhaps, as showing the evidence of anterior excitement, is that of a mare, seven-eighths of Arabian blood, after having produced a foal by a stallion quagga, (a species of zebra,) continued, after a lapse of five years to reproduce the markings of that animal, at

* The Mark-Lane Express of May 13th last, gives an account of a show of animals which had just been held in England, at which Mr. Twynam carried the prize for the "best ram of any kind, breed or age."

* Barrenness of females seems in some cases to result from excessive venereal excitement. Cases of this kind are entirely distinct, and are the result of a different cause from the imbecility here alluded to

three successive births, although the sire of all the subsequent progeny was a thorough bred Arab horse. This is a well authenticated fact, and correct portraits of the mare, the hybrid, and the three foals which the mare afterwards had by the horse, the latter showing the stripes of the quagga, are preserved.*

The influence of one black sheep, though it may never have any progeny, is often noticed in causing black lambs. Shepherds who have kept black dogs with their sheep, have observed the same effect. The nervous influence of animals in a state of pregnancy, shows itself very conspicuously in the effects of fright on the offspring. Many cases of this kind might be cited in the human species, as well as in our domestic animals.

AGRICULTURAL COLLEGE IN TENNESSEE.

In the March number of the Cultivator we mentioned that a charter had been obtained for an Agricultural College near Nashville, Tennessee. It gives us pleasure to be now able to state that considerable progress has already been made towards fitting the institution for the reception of students, and that it is expected to be opened by the first of January next. It has received the name "FRANKLIN COLLEGE," and is located at "*Elm Crag*," the residence of T. Fanning, Esq. editor of the Tennessee Agriculturist. We have received from Mr. Fanning a pamphlet containing the outlines of the system of education which it is intended to pursue. We are happy to see that our friends have commenced the work in good earnest, and hope their success may be all they have anticipated. The "outlines" seem to us to be based on the right principles. It is true, as here stated, that "no word has been more vaguely used than the term education," but we trust the time is at hand when proper education will be considered the cultivation of those physical, intellectual, and moral powers of man, by the harmonious exercise of which his own happiness, and that of his species, is promoted.

We would call attention to the following extracts from the pamphlet referred to:

"In conformity with the ancient maxim, that 'in a sound body alone can a sound mind exist,' we regard PHYSICAL EDUCATION as the firm basis of all useful training. As a broad, deep and solid foundation is essential to the stability and safety of an edifice, we esteem proper Physical culture as the ground work of the highest intellectual and moral attainments. Not that size and mere physical force are always sure criteria from which to infer the greatest strength of mind, but that the full development of the physical man is important to the greatest mental and moral energy. Believing these are plain principles in nature, the truth of which no intelligent mind will controvert, we proceed to detail the plan which we propose adopting for the accomplishment of this important improvement, in the system which we present for consideration.

Notwithstanding the strong prejudices against manual labor, as connected with the education of the young, we believe and trust they can all be removed, and that physical education will, at no very distant day, become one of the most agreeable parts of juvenile training. Experience and observation have and do demonstrate the great truth, that exercises in the way of sports are the engrossing employments of youth; and this clearly proves that physical exercises are disagreeable only from association. Parents as well as youths must be convinced that physical labor is at least as important as mental, before it will be appreciated.

The objects of the trustees may be more clearly seen by carefully studying the following propositions:

1. Physical Education is essential to good health, a vigorous constitution and a sound mind.

2. It was designed by the Creator as a blessing to man. He was made to "till the earth," and was placed in the garden of Eden to "dress and keep it."

3. Labor has been honored by the best of men in all ages, should be honored now, and the young should be taught to regard it as respectable and highly important to their well being.

4. While manual labor affords exercise of body, it offers recreation and variety to the mind.

5. It will enable youth to acquire knowledge of agriculture, horticulture and the mechanic arts, which will be very useful to them through life.

6. Labor, in an institution of learning, will supply the place of idle and vicious sports, and will be the surest preventive of dissipation.

7. Students, by devoting a portion of their time to physical culture, can apply themselves more clearly to books, and can think more intensely on all subjects.

8. Physical Education gives energy of character, and habits which will enable their possessor to succeed with more certainty in every avocation of life.

A full discussion of these propositions we deem unnecessary, for they are self-evident, and only require the intelligent to see them to be satisfied of their truth.

All learned and reflecting men admit there is a strong tendency to deterioration in the human family, and that idleness, from whatever cause produced, is productive of sloth, feeble muscular powers, defective intellects, and the consequent depreciation of all the powers.

There are two extremes in society which we have but little hope of materially benefitting by the system we propose. The very degraded and the very opulent, too generally view labor as a punishment, and therefore will be loath to adopt any industrious avocation. It is a lamentable truth, that not one man in fifty, brought up in luxury and idleness, ever becomes educated, is successful in business, or is even capable of retaining the estate inherited. Hence the doctrine of one of our profoundest statesmen, that generally in three generations property, and often respectability, passed from families. Not one in a hundred who does not understand the means of accumulating wealth by industry, is competent to take charge of it.

But objections are strenuously urged against labor as connected with education. It is said "Manual Labor Schools have been attempted and failed." This is true, and we add it was but just that they should have failed. When labor is performed as a degradation it cannot but be objectionable.

The evils are two, but both can be corrected.

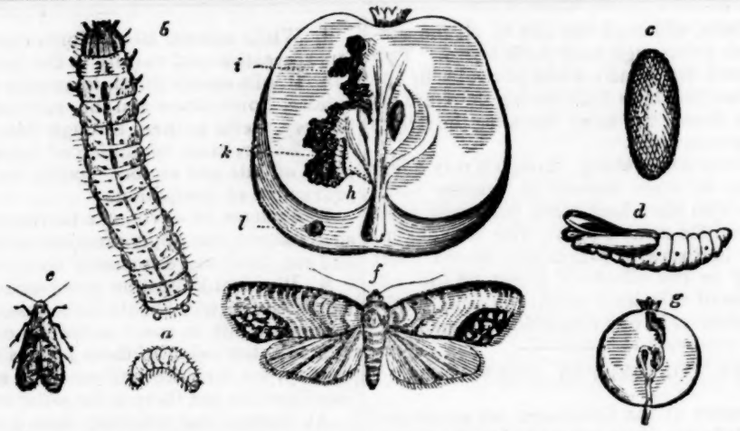
1st. The character of the employments were such as to forbid success. The hard labor of the cornfield, without science to direct, is truly uninteresting. It is our object to have such improvements and operations in the farm, garden, nursery and workshops, as will, in themselves, be interestng to youth. The importance of every performance will be fully explained by those amply qualified, and we doubt not by the proper classification of students, and division of labor, commendable emulation may be excited, and students thereby will become as much interested in physical as mental labor.

2d. The character and qualifications of those who conducted the physical operations in the manual labor schools with which we have been conversant, were such as to forever preclude success. Men without education have been employed, as a kind of overseers, to drive boys to their labor as slaves. To remedy this glaring outrage, we contemplate having all the physical labor conducted by professors, tutors and officers, of the institution, or gentlemen eminently qualified, and no student will be asked to perform service, in which the teachers shall not diligently employ their time.

On this plan the farm and garden will afford the best facilities for the study of geology, chemistry, botany, tillage, the care of crops, the propagation of fruits and ornamental shrubs; while the workshop will constitute an excellent laboratory for the study of natural philosophy. And it is not to be forgotten, that all men, whether lawyers, physicians, preachers, merchants, or others, will be much benefited through life by a practical knowledge of agriculture, horticulture, and the Mechanic arts."

RUST IN WHEAT.—Mr. Willam Messic, in a communication published in the Northern Planter, says:—"Wheat sown on land where gypsum is used freely, is certainly more apt rust, than where it has not been used." Does ... observation of others corroborate this?"

* See Nat... ...ibrary. Mammalia, vol. 12, p 342, &c



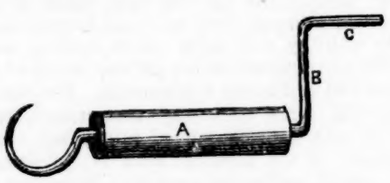
The Apple Tree Worm—*Carpocapsa pomonella*—Larvæ nat. size *a*; greatly magnified *b*; larvæ enclosed in a silk web *c*; chrysalis *d*; perfect insect *e*; magnified *f*; larvæ in a young apple *g*; larvæ feeding on the pulpy part of the apple *h*, *i*; larvæ *k*; quits the fruit at *l*.

The insects we have now described, have been depredators on the foliage or the wood only, the canker worm excepted; but there is another most mischievous enemy of the apple, that attacks the fruit only, and where it prevails is known as the apple worm. It is a true caterpillar, not a grub, like the plum and cherry weevils; and is the larvæ of the moth called *Carpocapsa pomonella*, the codling or fruit moth. A good description of this worm, with figures, which are copied above, may be found at 230 of Kollar's work on insects. In some years this apple worm has been so common in New-England, that a very large part of the apples were rendered worthless by it. It is very rare in the interior of the States, but we have occasionally met with it, and it is to be apprehended it will become still more common. The moth appears in the latter part of June, or beginning of July, and without puncturing the fruit, deposit their eggs in the hollow at the blossom end of the fruit, where the skin is most tender, and the worm the least liable to disturbance. As soon as the worm is hatched, which is in a few days, it commences eating into the young fruit, making their way from the eye towards the core, and marking its presence by the powder thrown out of the opening. The moth seems to prefer early to late apples, and the thin-skinned summer fruits suffer the most extensively. In the course of two or three weeks, the worm has burrowed to the core, and attained its full size. To get rid of the matters made in its excavations, it cuts a round hole through the side of the apple, and thus is enabled to keep its burrow clear. Sometimes the worm leaves the apple before it falls, but usually the injury it has received causes it to fall prematurely, when the worm quits it, and spins a cocoon, in which it changes to a chrysalid, and in a few days more, the perfect insect appears, to renew the work of destruction. These are only the earliest ones; the later ones do not perfect their transformations till the ensuing spring. The surest mode of destroying the apple worm, is to allow swine to run in the orchard, to gather all the fruit that first falls; or where this cannot be done, to pick them up by hand and feed them to some animal. The plum weevil and the apple worm are distinct insects. The plum weevil has been found in the apple, but the apple worm never in the plum.—*Gaylord's Prize Essay.*

COTTON GIN.

MESSRS. EDITORS:—In the number of the Cultivator for this month, I observe an inquiry from Central America, in relation to the cotton gin mentioned in my letter of 1842. I regret the information I have to give will not be very satisfactory. The model gin is yet in the hands of the inventor and patentee. He makes none, and so far as I know, will not allow any other person. There can be no doubt but this gin would answer for Sea Island cotton, as the least amount I have heard suggested for a day, is 150 pounds of clean cotton. The quantity is however, uncertain, as the inventor has never permitted it tested. He has told me it will clear 250. If this can be attained, it would abundantly answer for uplands. The gin would cost about $75. In the fall of 1842, a company purchased from the patentee its use for two counties, for which they paid him $5000, with the privilege in a given time to this State, if they so determined, for $50,000. This company sent on an agent, with the inventor, who by agreement was to superintend the construction of certain number of gins in Paterson, N. J. On getting there, a disagreement took place, and the model being in the possession of the patentee, he would not let the agent have it, & returned the money, and so far as I know none were made. I have heard it suggested, indeed it is said to be the remark of a Sea Island cotton planter, that they do not want it, as it would reduce the price of that species of cotton. The inventor is here now, and too busily engaged in perfecting other machinery, to remember any former matter of his ingenuity. The last made public, is a pump for lifting water, and this I consider the perfection of that machine. It is simple, efficient and durable —it is not bounded by quantity or height. The longest in use here, is 32 feet. This a child can work, raising 1¼ inch column. I am sure a man's strength would raise 1¼ inch column, 100 feet. J. B. COOK.

Demopolis, Ala., May 25, 1844.



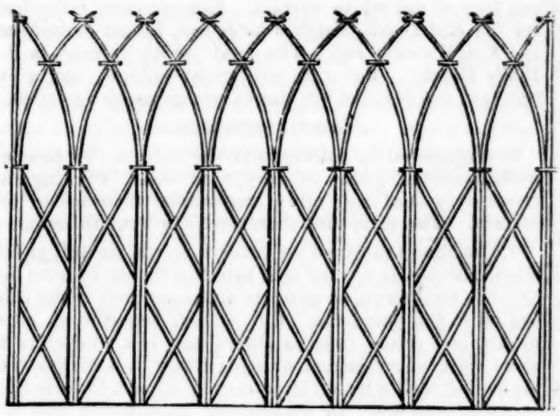
A STRAW BAND MAKER.

MESSRS. EDITORS—This little inslrument which I have used with success, (invented by a friend of mine) performs what it was designed for. With the aid of this a band of any required length may be made of short straw, from the threshing machine or flail. It requires two persons to make bands: one to let the straw out, the other to twist, somewhat similar to making a tow string.

When drawn out the required length and twisted, the band should be doubled and let twirl. This will keep the twist till the band is wanted to be used single. To form the instrument, round a piece of iron one half inch thick and about eighteen inches in length, form a hook on one end and make it small and sharp at the point. The hook is one and a half inches in diameter, with three quarters of an inch opening to receive the straw. Bore a piece of wood five inches long for a handle A, to turn on the iron next the hook; bend the remaining part of your iron B nearly at a right angle with the first bend A, five inches in length; bend the remaining part of your iron C at a right angle with the last bend B. On this you may have a wooden handle as before or not, as you choose. JOHN M. HARLAN.

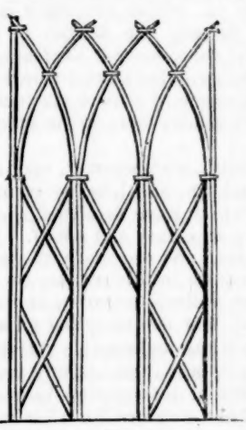
Chester county, Penn., May 17, 1844.

ANTI-MAGNETIC PROPERTY OF THE ONION.—The magnetic power of a compass needle will be entirely discharged or changed, by being touched with the juice of an onion.



GRAPE FRAME—(SIDE VIEW.)

MESSRS. EDITORS—I send you a rude draft of a frame for a grape vine or trellis. It is the cheapest, if not the strongest trellis for a vine, which can be constructed, being nearly all made of straight poles; the diamond work alone being made of slips of board about 2 inches wide, to be nailed to the poles on the inside.



End view. Entrance.

The four corner posts should be larger than any of the rest. All the others should be about 2 or 2½ inches in diameter each, at the foot. Two poles are tied together with large wire, say about 7 feet from the feet of them, or base; and at the corners, two poles besides the corner large pole, making three, are tied together, then lay them about two feet apart or more if you wish, according to fancy, only place them all at an equal distance apart, then nail on the slips of board as in the figure. Having completed the two sides, which should be alike, the two ends should be made in like manner as per figure; the two sides may now be raised and locked together by placing in the crotches short poles notched at each end to hold them together; then raise the ends and tie them to the corner posts, after securing the whole frame and placing a few boards across the poles, that bind the two sides together, for a floor to stand upon; then bend over the tops of the poles and tie them, as in the plate, and the whole is finished. This may be extended in length or width, and varied almost to any extent in height and proportions. Here you have a true gothic temple after covered with the vine, in which you may sit, and none to molest or make you afraid. The poles may be of oak or ash, or almost any wood that is straight and smooth, and will bend without breaking.

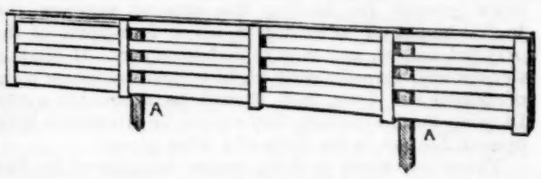
ELISHA THAYER.

Dedham, Mass., May, 1844.

IMPROVEMENT IN FENCES.

EDITORS OF THE CULTIVATOR—Having experienced great trouble and expense from my fences being thrown up every winter by the frost, and having attempted several expedients to remedy the evil with but partial success, I was pleased to hear that a patent had been taken out for a fence on a new construction, expressly designed to obviate this difficulty. The contrivance referred to combines all the advantages of the common post and board fence, and is less, or not more expensive, while it effectually guards against the action of the frost; and as in rural economy few things are so important as fences, I thought you would be pleased to make this improvement more generally known, through the columns of your useful journal.

The drawing I have sketched will give an idea of the construction. It represents two lengths of board



fence, say 12 to 14 feet each. The posts marked A, are alternate detached posts put in the ground, with a mortice over them in the cap, through which they may pass when lifted by the frost, without raising the body of the fence; and being sharpened at the lower end, they are easily driven to their place when the frost leaves the earth. These posts should be of locust or cedar. The other alternating posts, cut to the height the fence is wanted—say 4 to 4½ feet—may be of any less valuable timber: pine, or hemlock scantling, 4 by 4 or 5 inches, and those by the side of the long or ground posts, need not be more than 2 by 4 or five inches. A board corresponding to the top board in the figure, is nailed to the back of the short posts, close beneath the cap.

It will appear, from the inspection of the figure, that the fence keeps its station on the ground, while the posts which preserve its vertical position, may be thrown up, more or less, by the action of the frost.

I should add that there have been many trials in this county for the last two years of the advantages of this improvement, and so far as I am informed, with great and uniform satisfaction.

Mr. Isaac Van Amberg, of Watertown, in the county of Jefferson, is the patentee of the above "improvement in fences," and is now about establishing agencies for its wider diffusion.

HENRY D. SEWALL.

Watertown, Jefferson county, N. Y., May 29, 1844.

CULTIVATION OF FRUIT.—No. VII.

RASPBERRY, GOOSEBERRY AND CURRANT.

Although these fruits are not so important as some others, they should be considered as indispensable to every fruit garden. Their early maturity, their pleasant and agreeable flavor, the certainty of the crop, and the short period of time required to bring them forward to a good bearing state, render them truly valuable.

THE RASPBERRY.

This is generally considered as much superior to the other two in flavor. Most of the varieties are propagated with great facility by transplanting the suckers, and those which do not increase by suckers, are easily propagated by layers. Of the latter, are the Early Red, and the American White, both of which are well worthy of cultivation. The extremities of their recurved stems frequently take root spontaneously by bending over to the earth; but where this is not the case, they may be made to root with facility by making a hole in the earth with a sharp stick, thrusting in the ends of the branches, and securing them by pressing the earth about them with the foot. After one summer's growth, the newly rooted plants are detached, either in the autumn of the same year or the succeeding spring, and will bear some fruit the first year, and plentifully the second. New varieties are raised from the seed, and will come into bearing the second year so that their quality may be determined. Bridgman says, "Raspberry beds are in their prime about the third or fourth year; and if well managed, continue in perfection five or six years, after which they are apt to decline in growth, and the fruit to become small, so that a successive plantation should be provided in time. Select new plants from vigorous stools in full perfection as to bearing.

The soil for the raspberry should be rich and inclining to be moist. The culture is very simple; for common varieties, consisting merely in pruning each spring, and in keeping the weeds and grass well cleaned away from around them and the soil well cultivated. The pruning is best performed early in spring. All dead stems should be removed, grass and weeds cut away, and all the smaller shoots cut off even with the ground, leaving only from three to five of the most vigorous of the last sea

son's growth for bearing the coming summer; these should be cut off at the top to about four-fifths of their original height, and neatly tied together. If they are slender and not sufficiently rigid to bear the future weight of leaves and fruit, they should be secured to a stake. In tying them together, they should be allowed to spread open at the top in the form of a wine-glass.

There are twenty or thirty named varieties of the Raspberry, but we are able to speak from personal knowledge of but few of them. The *White* or *Yellow Antwerp*, is an excellent one and of large size; for excellence it is commonly considered as standing at the head of the list; but it partakes of a slight musky flavor, hence it is considered by some as inferior to others. The *Red Antwerp* is highly esteemed, but is inferior to the preceding.* The *Red Cane* is a good bearer and has a pleasant flavor. The *White American* is a very valuable one, and is probably too much neglected. The *Black American* or wild raspberry, (*Rubus occidentalis*) affords an excellent fruit, which probably might be much improved by cultivation.

The Currant.

The currant is very hardy, grows freely, and almost uniformly bears abundant crops; the pleasant flavor of the fruit is well known, and ripening early in summer when but few kinds of fruit are yet mature, it becomes of great value.

As to soil, Loudon says, "it generally does well in any common garden ground, well tilled and recruited; it bears the *greater crop* in a strong loam, or improved clay, somewhat moist; the *earlier* in a light sandy mould, which is not poor. Previous to planting the ground should be dug two feet deep."

The mode of propagating the currant is by *cuttings*. The shoots for this purpose are to be of last year's production, and of vigorous, straight and thrifty growth. Before planting, every bud is to be cut off closely except two or three near the top, to prevent the growth of too many stems. They should be inserted at least six or eight inches into the earth. Instead of allowing numerous shoots to spring up from each root, they should be trained to a single upright stem to the height of a foot, at which point the branches should radiate on all sides, in an upward direction, so as to form a handsome spreading top.

Currants, on account of their hardiness, are commonly totally neglected in culture, and are suffered to become overrun with grass and weeds, and to become crowded with suckers and numerous branches. Inferior fruit is always the result. To prevent this and increase the flavor and size of the fruit, they require proper and seasonable pruning, as well as cultivation of the soil. The leading requisite to be observed in pruning, is to cut away all superfluous shoots, especially those of less thrifty growth, and also old, unproductive branches, so that air and light may be freely admitted, and the fruit not too much crowded upon the bushes. Neill, author of the treatise on Horticulture in the Edinburgh Encyclopedia, says that Macdonald of Dalkeith House, "raises currants of the best quality. A good deal depends on the way in which he manages the bushes, especially during the ripening of the fruit. He prunes the bushes at the usual season of midwinter, shortening the last year's shoots down to an inch or an inch and a half. Next summer the plants show plenty of fruit, and at the same time throw out strong shoots. As soon as the berries begin to color, he cuts off the summer shoots to within five or six inches above the fruit. Sun and air thus get free access, and more of the vigor of the plant is directed to the fruit; the berries are found to be not only of higher flavor, but larger than usual." Kenrick says, "Mr. A. D. Williams of Roxbury, Massachusetts, practices winter pruning on perfectly similar principles, and with the most decisive results."

The *Red Currant* is the most highly flavored; but the *White*, being larger and not so sour, is by many preferred to the former. In the Catalogue of the Horticultural Society of London, are enumerated nine varieties of the red and four of the white currant. Loudon says, "the best are the *Red Dutch, Knight's large red, Knight's sweet red,* and *Knight's early red.* The best white currant is the *White Dutch.*" But rich soil, clean culture, and good pruning, has doubled the size of our common varieties.

The Gooseberry

Is propagated by cuttings like the currant. To succeed well, it should grow in very rich soil. Pruning the gooseberry is of still more importance than that of the currant. The following directions are from Bridgman:

"The shoots retained for bearers should be left at full length, or nearly so; the first pruning should be done before the buds swell, so as not to endanger their being rubbed off in the operation. Cut out all superfluous cross shoots, and prune long ramblers and low stragglers to some well placed lateral or eye; retain a sufficiency of the young well situated laterals or terminals, to form successional bearers. In cutting out superfluous and decayed wood, be careful to retain a leading shoot at the end of a principal branch. The superfluous young laterals, on the good main branches, instead of being taken off clean, may be cut into little stubs of one or two eyes, which will send out fruit buds and spurs. Some persons, not pruning the gooseberry bush on right principles, cause it to shoot crowdedly, full of young wood in summer, from which the fruit is always small, and does not ripen freely with full flavor; on which account it is an important point in pruning, to keep the middle of the head open and clear, and to *let the occasional shortening of the shoots be sparing and moderate.* Between the bearing branches, keep a regulated distance of at least six inches at the extremities, which will render them fertile bearers of good fruit."

The gooseberry is cultivated with greater care and success in England than elsewhere; and Lindley enumerates 722 varieties, some of which have furnished specimens of single fruit weighing an ounce and a half. But most of the English varieties, and especially those of large size, are unadapted to culture in this country on account of mildew; and neither culture, pruning, nor any other remedy has been found that can be relied on as a remedy. There are some medium and smaller varieties, which are entirely free from it, and these chiefly are to be recommended here. Sufficient information however as to their names, has not been obtained for a list to be given. J. J. T.

* These two varieties require protection in winter in the vicinity of Boston, by bending down the branches and covering them with earth; but this care is not generally needed in this State, except for the Yellow Antwerp.

PLOWING ORCHARDS,

If well done, and the trees not run over nor lacerated, is found to be a difficult work. To make it easy, get a short one horse whipple-tree about fifteen inches long, and attach one of the horses by long traces to the plow; fasten the other horse before it, and let them go *tandem.* A careful boy or man rides the forward horse, and another holds the plow. After the intermediate space between the rows has been plowed in the usual manner by horses abreast, as near to the trees as convenience and care will admit, finish the rest with the tandem team, rigged as just stated. The long traces will allow the plow to run as near the trees as is needed, and the short whipple-tree can scarcely be made to touch a tree. Well tested by experience. J. J. T.

THE GLANDERS.

Messrs. Editors—Whilst writing, I will mention a fact for your Veterinary department. More than 30 years since the glanders of the most virulent kind, was amongst the horses of the neighborhood in which my father lived. Great numbers died off. His horse was taken, and under the belief that he also would die, my father commenced an experiment on him with a strong decoction of tobacco juice, given internally. In a short time the horse broke out all over his body in sores. These cured up in a month or so, and the horse was sound, soon fatted, and was, as long as I knew him afterwards, a sound and healthy animal. This was the only horse in all the neighborhood that recovered. Some farmers in this vicinity, noted for fine sleek horses, give occasionally Scotch snuff to their horses. J. B. Cook.

LETTER FROM ALABAMA.

EDITORS OF THE CULTIVATOR—In several numbers of the Cultivator, you speak of potatoes, particularly as being useful as food for cattle. Now will you have the kindness to inform me what kind of potatoe you mean. We of the South, when we speak of potatoes, invariably mean *sweet* potatoes, not Irish potatoes. Had it not been for my lady, I would have gone to work in earnest to feed my cows on sweet potatoes. She suggested that the *Irish* potatoe was meant.

I deplore the death of Willis Gaylord. Such men are not the product of every age. How much more praiseworthy are the deeds of such a man, than those of the mere politician. Our State would be benefitted by such a man being within her borders. We have extensive resources yet to be developed, and it is necessary to have some one to call public attention to the important consideration of the full development of our agricultural resources. In other words, Alabama needs a Willis Gaylord.

In this connection, I would drop a word to the farmers of Alabama, knowing that many of them are subscribers to your valuable periodical.

Our State is considered one among the wealthy States of the Union, and this wealth is to be attributed to her agriculture. But few, if any, of the States, have been so exclusively engaged in the cultivation of the soil as this State. The profits of her agricultural products have exceeded those created by other pursuits of human industry. Of her improvement in the modes of cultivation, much cannot be said. The reason of all this is obvious. In the early settlement of the country, as indeed of all countries, the greatest inducements were held out to the settlers to engage in the occupation of tilling the soil, owing to its extreme fertility. By such tillage, even after deducting all the expenses of transportation to a distant market, their annual increase in wealth far surpassed what could have been accomplished by the most untiring labor of persons living in older countries. The early settler in Alabama, as is now the case in Missouri, Arkansas, Wisconsin or Texas, having many privations to contend with, looked to the fertility of the soil, 'the bright star of his hope,' as a recompense for the dangers and difficulties by which he was surrounded. And he but seldom looked in vain. Read the history of our early settlers, and you will read the history of many of the most influential and wealthy men in our State. They were not distinguished for their skill in farming, nor particularly for persevering industry in their employments. Still they prospered as 'a vine planted in a goodly soil.'

Two views are presented to us in contemplating the history of the early settlers of this State. They became wealthy, because of the fertility of the soil; and they were economical in the use of money.

If the farmers of the present day would grow rich, they must follow the example of these early settlers in cultivating a rich soil. In order to do so, their lands must be improved. Enrich the soil of Alabama, and you will have a country not surpassed by any on the globe. Every means to facilitate commercial, manufacturing, and agricultural prosperity are amply provided throughout the length and breadth of the land. In regard to commerce, we raise here an agricultural product which has never failed to bear a marketable price in any quarter of the globe. So valuable in this respect is it, that it has already, to some extent, become a medium of exchange between this country and Europe. I allude to cotton. This product of the soil of our own and the adjoining states, is now considered a fairer representative of gold and silver than the notes of the banks of those states respectively, although their faith and honor are pledged in behalf of the banks. This is not said with the view of disparaging state banks, but to show that this product which we cultivate at our very doors, is esteemed more valuable in the markets of Europe than a pledge of gold and silver, though that pledge be made by the most wealthy State of this Union. Having so valuable a commodity with which to freight our vessels, every harbor in the world is open to receive them.

The water courses of this State are well suited for manufacturing establishments, whenever these may be required. I understand that a contract has been entered into by some wealthy individuals to establish a spinning factory at the Falls of the Tallapoosa river. The water power is extensive, and no doubt at this spot will grow up a large manufacturing town. I am not an advocate for establishing large manufactories within the State at present. Our agricultural advantages are much greater than in the older States and in Europe, and they can engage much more beneficially in manufactures than we can, owing to the cheapness of labor there. If we, therefore, establish manufactories here, we bring high wages in competition with low wages—a want of skill in competition with skill carried to its greatest perfection.

When I speak of our agricultural advantages as compared with Europe, I have reference to the price of lands, by means of the cheapness of which, the great mass of our population may engage in tilling the soil. No one acquainted with the subject doubts, but that tillage is carried to greater perfection in Europe than in the United States, at least in the southern states. But if we will make the comparision, we will find that to the sum total of human pursuits, agriculture bears a greater proportion in this State than in most European countries.

With these multiplied advantages, let us use proper efforts to improve the productiveness of our soil. "So shall thy barns be filled with plenty, and thy presses shall burst out with new wine."

Nations or individuals, to become prosperous, must be economical in the use of money. The history of every nation proves that an extravagant expenditure of public money, has been the fore-runner of the decline of most governments. And the history of individuals shows that a wasteful use of money, is a too frequent cause of ruin to many.

I will not produce arguments to show that economy is a blessing and extravagance a curse. The experience of any man who has reached thirty years of age, and is possessed of an ordinary understanding will respond in the affirmative. A farmer, to be economical in the use of money, must by proper care prevent the necessity of paying out money in the way of expenses; or in other words, he must live within himself. In order to do this, it is not necessary that he should make all he needs. By no means. But it is essentially necessary that he should make his expenses conform to the amount of his annual income—just as a nation's imports should not exceed its exports.*

This may be considered an eventful era in the history of agriculture. The increased attention that has been given of late to the modes of cultivation, to the improvement of stock of all kinds, and to the interests of husbandry in general, promises a rich harvest to those who are deriving their support from these sources. Nothing has contributed more to effect this, than the establishment of agricultural societies throughout the country. From England, America took the example, and Alabama sho follow in the footsteps of the older states in this lauda enterprise. Although the State Agricultural Society Tuscaloosa departed this life in its infancy, still we ha reason to hope that the people of the State will again

* What is called the sweet potato and the Irish potato are vegetables belonging to entirely different classes—and perhaps we are not quite *scientific* in calling them both potatoes. The potato, strictly, belongs to the class *Solanum*, (*Solanum tuberosum*, *L.*), while what is called the *sweet* potato, belongs to the class *Convolvulus*, (*Convolvulus batatas*, *L.*) In this section of country, we mean the first of these when speaking of the *potato*, either as food for man or beast. Personally, we know nothing of the value of the sweet potato as food for animals; but we were lately told by a gentleman from the South, that it had proved to be excellent, and it was his opinion that no vegetable could be so profitably cultivated at the south for feeding animals. It will produce abundant crops on the sandy soil of that region, where the common potato and most of the root-crops raised at the north would be good for nothing.

* It has been contended by some that a nation's imp should exceed its exports. The fallacy of this doctrine I h not time now to examine. The doctrine in the text is supp ed by all the writers on political economy I have ever se Will Mr. Watts, of Butler, favor the readers of the Cultiva with a defence of the contrary opinion?

aroused to the importance, the vital importance of these societies to the general interests of farming.

They add dignity to that occupation. All the learning and talents of the farming community are brought together, and from mutual action of mind and mind, each one receives a proportionate share of improvement. This principle holds true in mercantile, manufacturing or professional, as well as in agricultural communities. Even among politicians we perceive the operation of the same principle in that notorious invention, called the 'caucus system.'

I agree with Prof. Newman, "that no member of a civil community is, in the strict sense of the word, *independent*." "If there is any one truth," says he, "taught more clearly than all others in the science of political economy, it is the mutual dependence and close connexion of the different members of a civil community upon each other." "The eye cannot say to the hand, I have no need of thee; nor again, the head to the feet, I have no need of you." Notwithstanding this, the independence of a farmer's life has become proverbial. His of all others, is least dependent on commercial or manufacturing industry. His flocks and his fields yield him the necessaries of life, and the rural simplicity of his habits makes him require but few of its luxuries.

"At night returning, every labor sped,
He sits him down the monarch of a shed;
Smiles by his cheerful fire, and round surveys
His childrens' looks, that brighten at the blaze
While his loved partner, boastful of her hoard,
Displays her cleanly platter on the board;
And haply too some pilgrim thither led,
With many a tale repays the nightly bed."

Do we ask for an example in some great nation of the earth in respect to the attention necessary to be paid to farming? *England* is one. She is the mother of improved cultivation. Having signalized herself in fighting on every coast that is washed by the ocean—having reached the climax of parliamentary greatness, and honored her arms by the brilliancy of her intellect—

"The land of scholars and the nurse of arms,"—

now thinks it no disparagement to her fair fame to strive for pre-eminence in agricultural improvements. Her Berkshires and her Durhams show the extent of her success in that department of domestic economy.

The spirit of emigration which has for several years characterized this and the adjoining States, presents a formidable barrier to extensive improvement of any kind. With many persons, not even useful and economical arrangements for domestic comfort are attended to. With such persons, the constant effort is to enlarge their fields. Each successive year brings an increase of acres, but a diminution of fertility, until the scene closes with a 'sale-day,'—the prelude to a removal to the great west. If this spirit prevail, Alabama will soon become an impoverished state, for her soil cannot always bear the burden of constant tillage without some return to restore its exhausted strength This spirit may be counteracted by exciting a zeal for improvement of the soil and its products. This will introduce a greater abundance of the comforts and luxuries of life, and one is loth to leave a place that is adorned with the monuments of his own industry. Attached to the soil—we love and venerate the institutions of our country.

"Such is the patriot's boast where'er we roam,
His first, best country ever is his home."

Will you give an account of where the best breeds of the Poland chickens (*crested* fowls—see Cultivator Feb. number, page 57) can be had—the same request I also make in reference to the Shepherd dog.*

I must close this rambling letter. I may at a future time send you another.

Very respectfully yours, * * *

Man at the best is but a composition of good and evil. Diamonds have flaws, and roses have prickles, the sun has its spots, and the moon its shade.

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* There will be plenty of the Crested fowls to be had here in the fall—at present we do not know of any to be sold in this vicinity. We have understood that a man a few miles from here breeds the shepherd dogs—we will inquire.

APPLIED CHEMISTRY:

In manufactures, Arts and Domestic Economy; edited by E. A. Parnell, author of "Elements of Chemical Analysis," &c. Publishing in monthly numbers by D. Appleton & Co. 200 Broadway, New-York.

Five numbers of this work have appeared, and they enable us to appreciate its importance to the people of the United States. The work is edited by E. A. Parnell, well known in London as the author of "Elements of Chemical Analysis." The reprint of the work by Appleton & Co. cannot fail to be advantageous to the arts and manufactures of our country.

The numbers before us contain some preliminary observations, and the history, progress and present practice of gas illumination, the preservation of wood, and the arts of dyeing and calico printing. These subjects are interesting to the general reader, and demonstrate the intimate connection between science and the practical arts of life. Chemistry particularly is applicable to all the arts as well as to agriculture. The subjects which are admirably well treated in detail in the numbers of the work before us, are not immediately connected with husbandry, yet we find that the cultivation of the earth supplies resin and oil which may be employed in producing gas lights, and dyeing drugs which are applied in the arts of dyeing and calico printing. The preservation of wood is interesting to the farmer, and the treatise on this subject shows the various and most approved methods of securing from decay, wood and timber for the construction of ships, houses, barns, fences, &c. We are given to understand that some of the future numbers will have a more direct bearing upon agriculture, and we patiently wait their arrival.

A PRACTICAL FARMER.

NORTH CAROLINA.

EDITORS OF THE CULTIVATOR—I have thought that it might be satisfactory to say a few things in favor of the claims of western North Carolina, to those inclined to move southward.

1. *Climate and Health.*—A glance at the map of North Carolina will show the location of Iredell county, and Statesville its county seat. From a few miles east of the town to the mountains, is a belt of country as healthy perhaps as any part of the world—as free from fevers as the mountains, and much less subject to imflammatory diseases. Its atmosphere temperate and pleasant.

2d. *Soil, &c.*—The general character of the soil is good, and readily susceptible of improvement. Wood land abundant, the growth of which is the different varieties of oak, of good size and quality, hickory, pine, poplar, &c. The soil is generally somewhat mixed with sand, resting on a clay subsoil, adapted to the culture of corn, wheat, oats, tobacco, roots, &c. The country is well watered, abounding in streams well adapted for machinery, &c. Price of land from $1 to 7 or $8, owing to location and other advantages.

3d. *Moral aspect, &c.*—There are comparatively few slaves in west North Carolina. Wealth pretty equally distributed. Hospitality and sociability characterize the people. The mass of the people cultivate their own farms themselves. Manual labor is not regarded as disreputable. Moral excellence and not wealth is, to a considerable extent, the test of character. Educational and religious privileges depend on the location. The settlements originally peopled by the Scotch-Irish from Pa., have flourishing Presbyterian churches and regular preaching, Sabbath schools, &c. They also have good common schools and academies. The state has commenced a system of common schools which will eventually greatly aid the cause of education. The Methodists and Baptists also have churches throughout the country.

By giving a place to the above in your columns you may oblige many of your subscribers. Should farther information be desired, it will cheerfully be rendered by corresponding with the Postmaster at Bethany Church P. O., Iredell county, N. C. W. A. D.

By energy and honesty men become prosperous and happy.

AGRICULTURE OF SEEKONK.

MESSERS. EDITORS—I offer to you for insertion in your paper, a statement in regard to Seekonk, in Bristol county, Mass., its productions, the market for the same, cost of production, and the farm capital required there, for common cultivation, &c.

Production, &c.—The usual articles produced in Seekonk, are corn, rye, oats, potatoes, onions, carrots, hay and vegetables. These articles, for the most part, find a sale in Providence. Seldom is any thing sent to Boston, except poultry, and of late less of that than in former years. Much greater attention is now paid to the preparation of manure in the barn-yards; and compost heaps, with rock and seaweed manure, swamp and beach mud. This manure is worth $2.00 per cord. Manure in large quantities is brought from Providence at the cost of $3 or $4 per cord. Besides a large amount of *night soil*, also brought from that city. The land is and has been greatly exhausted by hoeing in winter rye, and leaving the land in corn hills without hay seed. There are but few sheep in the town, and but little flax or hemp is raised for sale. The cultivation of fruit as *such*, in the vicinity of Providence river, is not attended with much profit. The apples here raised are mostly made into cider. Beef and pork are raised for the consumption of the inhabitants merely. Seekonk furnishes yearly about 1,000 barrels of potatoes, and probably 1,000 bushels of onions to the merchants of Providence for shipping. There is greater attention paid to the repairs of buildings, &c. embracing the health and comfort of both man and beast. The cost of cultivating one acre of corn, with the operations of plowing, planting and hoeing, together with twelve loads of manure, at $1 per load, (the fodder being estimated to pay for harvesting,) will be about $20 per acre. In 1843, one farmer here planted three acres in corn, put forty loads of manure on it, plowed and planted it four feet between the rows, and three and a half feet apart, at the cost of $24 per acre. Cost of manure $40. Harvested therefrom 50 bushels per acre.

FARM CAPPITAL.

Live Stock.	
1 yoke of oxen,	$70 00
6 cows at $25 each,	150 00
2 horses at $75 each,	150 00
4 yearlings,	40 00
10 sheep at $1,	10 00
6 shoats,	18 00
12 fowls 25 cents,	3 00
3 turkeys, 75 cts.,	2 25
	$443 25
Farm Implements.	
1 wagon,	$75 00
1 cart,	50 00
2 harrows,	15 00
1 plow,	9 00
1 horse do.,	7 00
6 rakes at 42 cents,	2 52
2 dung forks,	2 00
2 pitch forks,	1 50
2 shovels,	2 00
2 wood axes,	2 50
4 hoes,	2 00
1 iron bar,	83
2 oxchains,	3 00
1 set of horse chains,	3 00
1 bridle and saddle,	10 00
Ox yokes and bows,	2 50
3 scythes,	2 50
3 snaiths,	1 50
2 sickels, 42 cts,	83
1 cultivator,	4 00
1 churn, cheese press,	3 00
Garden spade and iron rake,	2 00
1 horse wagon, &c.,	60 00
Live stock,	$443 25
Farm implements,	261 68
	$704 93

Rockweed will cost here $4 per cord, which it is worth when pulled off the rock. Seaweed if carted two miles with four ox teams will cost $2 per cord.

In the vicinity of Boston four or five cords of manure per acre at least, and in some instances more are regarded as requisite to advantageous or successful farming—that is taking into view the permanent impovement of the farm; and by many this item ought to be marked as capital, and perhaps in reference to the actual cultivation of vegetables, &c. it ought to be included under capital, while in mixed husbandry I should be inclined to class it under the head of the necessary expenditures. Something ought to be set down for the necessary furniture, which depends very much on he pleasure, disposition, or objects of the farmer; though in my opinion it ought to be put at $50 to $75. In regard to repairs, blacksmith work, labor, &c. you have as good means of forming an estimate as myself.

Cambridge, April, 1844. WM. JENNISON.

More old men are found in elevated situations than in valleys and plains.

GRAFTING.

I noticed with some surprise in an article in the 5th number of the Cultivator, a recommendation to graft always on a short stump not more than an ineh above a strong lateral shoot, which shoot is to be left growing for one entire year afterwards. Observation, it is stated, has proved its success.

Having inserted, in my day, many hundred grafts, I am compelled to say that however successful this method may have been, a different one has proved much more so. Why is it that in grafting a small tree, every nurseryman is always careful to rub off all the buds os shoots on the stock? If this is not done, the communication between these shoots and the stock being complete, and between the stock and the graft very imperfeat, all the sap will flow into the former, and the latter will dwindle and perhaps die. The sap must be thrown into the graft, or its buds cannot swell. They must swell, or the new leaves cannot be formed. And unless these are formed, the carbium or newly hardening wood cannot be sent down to make a permanent junction between the stock and graft. Who has not observed a graft, even after its buds had expanded, remain stationary in growth, by the side shoots around it abstracting all the nourishment from it, instead of imparting support to it? The side shoot, which "E." recommends, and the graft, are both feeders from a common fund or stock; but the former, for the reason just given, is rapid, hungry and voracious, while the latter is at first, a very sparing and delicate feeder. I imagine, then, that this side shoot is going to help the graft, would be about as absurd as to suppose that a strong hungry pig would fatten a weak and sickly one by eating from the same trough.

As for the alledged nourishment which the graft gets from the leaves of the side shoot, "E." himself shows unintentionally, that this cannot be; for why, as he says, does a closely cut wound heal over speedily, while a short stump does not heal? Simply because in the latter case there is a *fork*, and juice can no more flow from the leaves, down one branch, and then up another however short, than the waters of the Monongahela can flow down to Pittsburg and then up the Alleghany. X.

THE NEW VOLUME OF TRANSACTIONS.

An eminent philanthropist of this state, who has been for many years a most strenuous opposer of capital punishment, has lately remarked that he thought of changing his mind—as his communications for the press are so horribly mangled and murdered by the mistakes of the printers, he thinks if any body deserves hanging they are the men. It is not my business to say whether he is right or wrong; I have, however, just been strongly reminded of his remark by looking over the last volume of the Transactions of the State Ag. Society, where on page 504 the writer is made to say that he spreads several bushels of *potatoes* [instead of *plaster*] over his compost heap;—on p. 205, where the *exuded* sap, is printed "*excluded* sap;" on p. 449, where it is remarked that the soil is sandy, and *generally* loam, instead of *gravelly* loam as intended;—on page 454, where Gilson's Root *Shears* [*slicer*] is mentioned,—and others equally amusing or provoking, as the reader's temper may chance to be. X.

EDITORS CULTIVATOR—Permit me to ask your respected correspondent "Junius," who writes so feelingly on the subject of applying pretty names to ugly cows, if he intends also to exclude ugly and unamiable human beings from the benefits of those good names? Or is a cross woman never to have any name at all? Now as I happen to know of some specimens of the latter class, that are infinitely more debased, sunken, and self-degraded, than any of the lower orders of animated beings, which though they perfectly fulfil the purposes of their creation, excite so much horror in the mind of "Junius," I wish to know whether he as arbiter-general of all female names, will permit such to have even a well-sounding name, as "Emma" or "Julia" or no name at all. I wish to avoid controversy, and hope he may answer "Yes," or "No," as the case may be, or at least write no more than I have done. BRUTUS.

BOSTON CENTRE-DRAUGHT PLOW.

MESSRS. EDITORS—I have read with much interest the communication of J. G. B. in your last, on the "Boston Centre-Draught Plow of Prouty and Mears," in which he notices some peculiarities, which, in his opinion, require obviating, although he admits his conclusions "are not the result of any experience with the plow, but are formed, simply by seeing the excellent plate in a former number of the Cultivator." Now, with all due deference to your correspondent, I must take leave just to observe, in a court of inquiry, no witness is permitted to proceed one step, after confessing that he knows nothing about the subject by *experience*, but merely as matter of *opinion*. But let that pass, and allow me to say a few words in defence of an arrangement which I have found, by the test of the fullest examination and repeated trial, to be perfect in all its parts.

And first, "the fastening extending down from the back of the standard," does *not* interfere with the operation in very deep plowing, and therefore the plow does not require the beam to be raised, which would destroy the symmetry and proportion of the most elegant implement that was ever constructed. I was, the past week, engaged on trial in the heaviest and most difficult soil in Lancaster county, Pa., against the favorite plow of that neighborhood drawn by three horses abreast, in turning in a first crop of clover of the strongest growth, which required to be dragged down before the implement could be made to touch it; taking then the whole strength of the team to accomplish it, with a furrow from four to six inches deep, but by no means subverting it so as to cover the crop; while with the Centre-draught No. 5½, new gearing, without dragging the crop, and by the aid of two of the horses only, it was just the easiest thing in the world to turn the crop completely under, to the regular depth of seven inches, the horses absolutely not feeling the labor or losing their breath, much less "turning a hair." The company, many of them neighboring farmers, desirous of seeing how large and deep a furrow so small a plow could be made to turn, the wheel was let down, when the furrow-slice, measured on the spot, was found to be 11 inches deep and 16 inches wide; the fastening extending from the standard not interfering with the operation in the least. And more than this, the plow carried over this enormous mass, burying the whole of the vegetable matter by the aid of a drag-chain, and placing it *hors-du-combat*, without any one touching the handles, for a considerable space, to the admiration of every one present. Here also was a trial of the strength of the wheel attached to the side of the plow, for the land was so rocky that it was often brought up all standing by large stones sunk below the surface as well as above it, and entangled by the heavy crop of clover, so that the wheel was often buried out of sight; proving that the single strap is sufficient for the purpose of permanency and security. This trial took place on the farm of Mr. Moses Burton, Salisbury township, about a mile and a half from the Gap, and in presence of many of the first agriculturists of the county, amongst whom were Mr. Caleb Burton, his brother and son, and W. Penn Kinzer, Esq. of Spring Lawn; and in the hands of these men, the plow did, indeed, "do all but talk." The same plow had been used the day before in turning the sides of the high road, no other land being to be obtained; and here, by the hands of a lad 12 years of age, the son of Mr. Mark Cooper near the village of Enterprise, the work was performed with perfect ease, the wheel and rod extending back beyond the standard, enabling *the child* to manage her with surprising skill and accuracy.

The observation, that different soils require differently constructed plows, is perfectly admissible as a general axiom; but the Centre-draught plow works on so very "different" a principle to that of every other, that to judge of its powers and capacity it must be seen and felt; and until then, I should despair of being able to convince your correspondent of the fact. The Centre-draught plow of Prouty & Mears is indeed a self-sharpener in the best acceptation of the term; for after five trials on the most difficult soils, the point of the share was scarcely rubbed, and by no means required turning; while the owners of many of the favorite plows in the neighborhood admitted, that on such soils, every second day at farthest, their points required renewing, at the cost of sixteen cents; expressing astonishment to find that a double point and share of No. 5½, at the charge of 62 cents only, are found to turn from 60 to 80 acres, and often more. Your correspondent's account of the mode in which the only sharpening process is conducted, by the renewal of the parts, is lucid and satisfactory; it is proper to observe however, that the wing or share of the Prouty plow is made to move also; it is therefore sharpened, as well as the point, by the same operation.

That Mr. Bergen's plow is the best for green-sward, "especially if the soil is old and tough," that your correspondent has ever seen, I have no doubt; but he must *see* the Boston Centre-draught perform that service before he can form an idea of the perfection which has been obtained in that all-important operation—it would be vain to attempt to describe it; the "age and toughness" of the sod being quite an indifferent circumstance. His remarks, regarding the proper angle of the mould-board for turning soils of different kinds, with the admission, that with those in common use—not excepting the Bergen, I presume—some soils will always be found to adhere, are, I have no doubt, perfectly correct; and I consider it would be a much easier test to travel a hundred miles to convince him by occular and tangible demonstration that these do not apply to the Centre-draught, than to attempt to overturn his opinion by any thing that I have it in my power to say; I would therefore cheerfully take such a step to obtain a trial, he being constituted judge, with a jury of 12 honest and practical men of the neighborhood; it would then be easy to show the perfectly different principles upon which the Centre-draught plow is constructed, but which are at present so little understood: in short, it is "spade labor," which is now universally admitted to be "the perfection of good husbandry."

In conclusion I would add, while your correspondent recommends the Bergen plow for its superiority in *ordinary* soils, I claim it for the Boston Centre-draught with the new gearing, for those of every description, ordinary as well as extraordinary, heavy, light, sod or corn-ground, wet or dry, crop or no crop; and ask leave to use his very expressive and descriptive terms of commendation. "Its advantages are, lightness of draught, strength, economy in the cost of sharpening, and the capacity of performing the best work in green-sward; durability, for the friction being easy, the mould-plate will wear well, while the advantages of the improvements of the wheel and the new gearing attached to it," are emphatically its own, and cannot be applied to Mr. Bergen's plow—much as it might require its aid—without fraud and robbery; other "Patents" lying under the same predicament. Who was the inventor of the self-sharpening principle, is a question that cannot be solved at this time of day; I presume it was concocted long before Mr. Bergen's entrance into existence; I know at least a dozen who conceived themselves entitled to this distinction, the inventors of the Centre-draught, however, not claiming it, the patentees considering it honor enough to have *invented* the best and most important mode of applying it, and enabling its possessors to plow their lands at the expense of less than one cent per acre for blacksmith's bills; and by these and other improvements—the foremost of which is the new gearing, so faithfully and beautifully portrayed in your invaluable page—to save, by superior culture, after tillage and increase of crop, about the cost of a new implement on every 25 acres of land worked by it, whether the soil be ordinary or extraordinary in its texture and consistency.

Montgomery Co., Pa. CENTRE-DRAUGHT.

P. S. If your correspondent be really a practical man, desirous of "seeing" the operations of the Centre-draught, I would not consider the pleasure of an interview over paid for, by the expense of a journey of many miles to accomplish a wish that would then be mutual. I attach my real signature, which you will please make known to your correspondent in this case, and present him with my respectful consideration.

THE SUGAR CANE AND CORN-STALK SUGAR.

MESSRS. EDITORS—An article in the Cultivator, (May number,) page 150, calls for, and is deserving a reply from me; and although you are probably ere this, in possession of a more full explanation from me in Mr. Ellsworth's (the Commissioner of Patents) Report, page 159, I will briefly explain:

In attempting to make sugar from corn-stalks, we too, were disappointed in not being able to effect granulation. Probably if we had lowered the knives, or waited a few days for it to have ripened higher, it would have granulated, and the juice would have been sweeter; though 8 degrees specific gravity is a good average for cane.

The odor from the kettles while boiling, was very offensive, and the flavor of the syrup disagreeable and well expressed by Mr. Patterson of Tarentum, Pa. If, as you state, "soon after a critical period, the sap changes, and cannot be made to granulate," this would greatly hazard the crop, for a rainy season might prevent its manufacture at that period.

Again. Our crop was by no means extraordinary—2,750 pounds per acre is not extraordinary. It was good; well cultivated, and on good ground, though not manured, except the trash for ten years had been left to pulverize on the land instead of burning it off as is the custom here. There is a difference between plant cane and rattoon cane. It is considered good economy to cultivate rattoon cane when it will yield 1,000 pounds per acre or even less; because it requires so little cultivation or no planting, and ripens early. 1,000 pounds may be the average per acre of the crop in Louisiana. A good planter will make more. Plant cane on good land, well cultivated, will average from one and a half to two hogsheads, say from 1,500 to 2,000 lbs. per acre, often more. 4,000 lbs. have been made where the ground was well manured, on an acre. I am speaking of facts. I know sugar planters may deem it bad policy to make these statements; fearing lest other sections of the country may suppose sugar planters are getting rich too fast, and be induced to lower the tariff. But if it be so, why is not the cultivation more extended? Why not make less cotton and more sugar. There is ample good sugar land in the sugar district in Louisiana to supply the whole country. I hope the experiment on corn sugar will not be abandoned till it be fully tested on a large scale at the north. Let only those who are able to lose, first try it. I feel sure it will prove a losing business.

In comparing our poorest yield to your best, many may be deceived. SHUBAEL TILLOTSON.

New River, La., May 24, 1844.

THE VERMONT STUMP MACHINE.

EDITORS OF THE CULTIVATOR—When I first saw a draft of the Vermont Stump Machine, in the October number of the Cultivator, I resolved to make one, which I accordingly did the past winter. It appeared to me a very unwieldy thing, and as my land was uneven, I thought it not firm enough to answer the purpose. To obviate this difficulty, I made it somewhat different, and I think better. The machine is much smaller than the one described in the draft. The wheel is only 8 feet 5 inches, shaft 11 inches, upright parts 7 feet high, and standing 8 feet asunder. I framed a piece 5 by 7 across, just near enough the tops of the posts to allow room for the shaft and chain to work, braced it at the corners with old tire, 2 feet long, a ¾ bolt through each end, and through the upright and cross piece, which holds it firmly together. I then hollowed out the tops of the posts so as to lay the shaft in them. The wheel works outside of the post as near to it as possible. Thus the objection urged by a correspondent, that it would crush down, is removed; and even on land that is hilly, by going up and down, it will work pretty well. Some of my friends ridiculed the idea of drawing stumps with such an article; but their notions were changed when they saw it in operation. I consider it a valuable invention. The stumps that I undertook to draw had been cut some 4 years, and not large. After breaking some of our common log chains, I procured one made out of ¾ inch bar, which I think will stand a stronger machine than mine: but on putting a double team to the rope, I broke the arms of the wheel; so I let it stand, and planted my corn, intending to renew the operation again. The arms were only 2 by 6 inches. I think a machine can be made strong enough on this principle to draw any ordinary stump after being cut 3 or 4 years. If any one thinks it too much on one side, which might be the case if the wheel is large, let him put a wheel at each end of the shaft outside of the posts, which will balance. He then may apply force to one or both wheels as the case may require.

Chester county, Penn. 6 month 3, 1844. J. W.

N. B. I think the machine described in the February number of the Cultivator, is about the right size. If he would frame a piece across, it would not require propping on the side of a hill, nor would the oxen pull it to pieces so easily. The piece may appear in the way, but the shaft being much larger, it will not be much obstruction to the chain.

SOUR SOILS.

I have just read the article of "A. J. P." in the last number of the Cultivator, and I wish to invite his attention to one fact, which though not decisive perhaps on the subject, is certainly worthy of consideration. This fact came under my personal observation last year, and is as follows. On the farm of Dr. C. S. Button, of Newark, Wayne county, N. Y., there was laid, ten years ago, about 150 rods of lead pipe for the conveyance of the water of a spring, from a hill side over a valley, to his dwelling. The water ran freely for nine years, and then became obstructed. The pipe was examined at various points, and found perfectly sound and uninjured, except on a part of the hill-side, where an abundance of sorrel grew (*Rumex acetosella*); here it was strongly corroded, and in several places actually eaten through, which caused the obstruction. This fact was the more striking, as all the other parts of the pipe were so little injured by time that even accidental scratches upon the lead remained unaltered.

It can hardly be supposed that the corrosion was caused by the acid actually existing in the plant, brought into contact with the pipe, as the latter was buried from two to three feet below the surface.

A. J. P. states that lime, "even if applied in immense quantities," does not prevent the growth of sorrel. Lime, however, has been found greatly to lessen its growth. On the grounds of W. S. Dell of Junius, Seneca county, N. Y., which partake of the character of what is generally known by the term *sour soils*, and where sorrel grows abundantly, the plentiful application of lime has, with the exception of a few straggling plants, caused its entire disappearance.

There are some plants which are regarded as existing solely on sour soils; among these is the yellow pine, which immediately perishes if removed to those of a different character; and even when a body of earth is carried with its roots, it only survives just so long as the roots are confined to this body of earth. The effect of lime on such a tree in its native locality, would be interesting to know. Sorrel (*Rumex*) will grow on land where the yellow pine perishes. Hence perhaps the reason lime does not wholly remove it.

The preceding facts of course are not intended to decide this question, but rather to keep it in a state of suspense, until more is known. The great difficulty of determining the constituents of the soil, and their various combinations, are not always duly estimated; the single fact, that distinguished chemists have made out, as they supposed, some twenty different substances constituting that particular portion of soil known as vegetable mould, and are still at variance on the subject, shows that these are matters not to be settled in a day.

Macedon, N. Y., June 10. J. J. THOMAS.

TO REMOVE GREASE SPOTS from a book, apply a quantity of pulverized prepared chalk or whiting, to the paper on one side, and then warm and melt the grease by a hot flat iron on the other side. As soon as the grease thus becomes liquid, the chalk will absorb it.

THE SETTLER IN A NEW COUNTRY.

MESSRS. EDITORS—I have seen in the Cultivator some inquiries as to the best mode of clearing land, and the general management on a new farm, and I am half inclined to give you my notions on the subject; merely premising that if I could wield such a pen as your correspondent Solon Robinson, whom may Heaven long preserve, I should feel much more confidence that this paper would not be consigned to your Baalam box.

It is now some forty-three years since I left the old homestead in the land of steady habits, and with tolerable spirits, but less money, made my way to one of the interior towns of this State, then on the verge of the white settlements, and into which some three or four families had the year before preceded me. A lot of 100 acres was selected, on which an axe blow had never been struck, and which was a mile from the nearest neighbor. Deep, dark, and majestic were these primeval forests; and a formidable undertaking it was to be buried in them, with the hope of working one's self out into the light of day, and the rays of the glorious sun. But few were the places in those days from which a glimpse of the country around could be seen, and where such glimpses could be had, nothing met the eye but one vast unbroken sea of foliage, with perhaps a few blue smokes curling up through the tree tops, and showing where some adventurer like myself had established himself.

The first undertaking was the house for the family. A fine clear spring determined its position; a small space was cleared of the underwood, and a house made of logs and covered with boards was soon constructed. Lonely were the first nights passed in that pioneer building, with the wind moaning through the tall trees that overhung the humble residence; the light from the wood fire that burned at one end of the earth floor, throwing its fitful flashes through the crevices, upon the massive trunks that stood like giant sentinels in the gloom; and the owls scared from their retreats in the hollow trees, or attracted by the unwonted apparition of such intruders on their solitudes, held a clamorous serenade of tu-whit! tu-whoo! in all its modifications, about the dwelling. It was truly a serious matter to contemplate the vast amount of labor that would be requisite to fell, burn, or remove the forest covering of the soil, and convert the wild woodlands into fruitful fields; but willing hands and stout hearts were brought to the work, and while the merry ring of the axes were heard on every side, the "opening" spread apace, and the fears of the women that some unlucky tree might crush in its downfall the rude hut, were speedily dissipated by the prostration of all from which such a danger could be apprehended.

It was the beginning of summer; the heavy foliage wore its freshest green, and the elm, maple, and linden, were successively laden with flowers. Never shall I forget the rich, the indescribable perfume which filled the air, as tree after tree was cut down, and day after day passed, before the blossoms had ceased to exhale their odors from their withered cups. A practiced woodsman had the direction of the 'chopping,' and under his guidance acre after acre was prepared for the burning. The slope of the land, the proximity and inclination of the trees, all had to be considered, before the chopping was done, as on these things the facility of 'burning' and 'logging' was mainly depending. Where it was possible, some huge tree was felled, and upon, and parallel with this, all that could be made to reach it, or conveniently be piled upon it, were cut for this purpose. The brush was cut from the trunks, and piled carefully and separately into heaps, experience proving that the neatness of the 'fallow' after the burning, was much depending on this operation. Some 'choppers' neglected this piling of the brush, merely felling the trees, or perhaps lopping the branches a little, trusting to a dry season and a thorough burn, to save this additional labor; but nine times out of ten, the labor saved in the chopping, was doubled in the final logging and burning.

After the chopping was completed, the brush dried, and all hands ready, came burning the 'fallow.' For this purpose a hot dry day, with but a gentle wind is to be preferred; since the fire burns the cleanest in a dry day, and no matter how still the day may be, there will always be wind enough as soon as the fires are well burning. In setting the fires it is best to begin on the leeward side; unless the whole is so dry that when once kindled the fire will run over the whole ground, when the windward side may be taken. If the brush is well piled, and fully dried, little will be left after the fire, but the trunks of the trees, and in many cases a large portion of the smallest of these will be consumed. If the trunks were not cut up into suitable lengths before the burning, this work comes next; if already cut up, the 'logging,' or the rolling the logs into heaps preparatory to their being burned, may commence at once. In logging, three men are required to one team, two to roll the logs and one to draw them. If chopping is neat work, logging is the dirtiest that occurs in clearing land; and the tow cloth frocks and trowsers, are very apt to call down the anathemas of the washer-woman. In cutting up the timber, after the brush is burned, a sufficient quantity of the best kinds for fencing must be selected, and cut in suitable lengths for rails. Chestnut, red elm, butternut, basswood, &c., are generally chosen, where they can be had, and lengths of ten or twelve feet make the best rails for worm fence, the kind commonly constructed in new districts of country.

In the clearing of land, the disposal of the ashes left by the burning of the log-heaps is a matter of some consequence. They are scarcely needed on the soil; indeed if left as they lie in masses after burning, they are positively injurious, every settler in a new country knowing that no wheat grows in the places where the ashes of the log-piles are left. It is the custom generally to gather the ashes, and sell them to the potash manufacturer, or else construct leaches on the spot, and convert them into what are called black salts, and then these are sold, usually at a respectable profit. It is perhaps the best way of disposing of them, to scatter them with a shovel over the unburnt spaces of the fallow, as cultivated soils soon need all the alkaline matter that can be furnished them, and ashes are among the cheapest and most valuable of the class.

In sowing wheat on newly cleared lands great care must be taken to see that the wheat is properly covered around the numerous stumps that occur. If left to the harrow alone, there will be several feet around each that will produce no grain, and will be pretty certain to be occupied by some pernicious weed. A man should follow the harrow with a hoe, and see that the whole surface of the ground is stirred, and the seed in every place covered.

The first half dozen years spent by us on our new farm, and during which we encountered those privations peculiar to the pioneer life, were years of hard labor it is true, but now that we at our ease look back upon them, we could hardly from our whole lives, select the same number, in which we have enjoyed more positive happiness. Those who have always resided in places long settled, are often heard to wonder that so many of those who settle and cultivate our new districts, should be willing, as soon as their farms are cleared, and they can begin, as it is called, to enjoy life, to pull up stakes and again plunge into the wilderness to undergo the privations from which they have but just escaped. I do not participate in such feelings. I am not certain, that even now, I could not be induced to seek a new home in the woods; indeed I am certain of it, could the activity, health, and spirits of the past be recalled. I should not, it is true, crave the privilege of again being obliged to go twenty miles to mill; fifteen miles to a store, or a blacksmiths; or eighteen miles to a post-office: but I should like to have the pleasure of again seeing nature in her wild but comely undress; to see the beautiful red deer scarcely frightened by the presence of man seeking the fallows and the fields, as if inviting protection; to see the elements of society combining into a healthy and rational organization; to participate in that kindly, brother-like feeling, which is always found among the settlers of a new district, and which I regret to say so often is lost in that stony selfishness which usually attends the accumulation of wealth; and to witness the building up of those

associations which attend, and at the same time promote civilization. A BACKWOODSMAN.

SYMPHYTUM, OR COMFREY, AS FOOD FOR MEN AND CATTLE.

MESSRS. EDITORS—A hasty and partial description of this vegetable, was circulated by many papers in the autumn of 1842. I wish now for the public benefit, to exhibit *more fully what I know, and what I believe on the subject.*

The botanic name of this plant is *Symphytum*, a word of Greek origin, signifying *springing forth in company*, which is descriptive of its growth, both root and herb; *but not of its nature.* The word *officinale* is sometimes added in books, signifying that a species or preparation of it, has somewhere, or at some time, been kept for sale in the shops of the apothecary. It is *perennial;* but how long I do not exactly know; but, perhaps, till the ground near, is filled and choaked with roots, It will then die, and afford the soil an abundant and rich manure. It is very hardy and vigorous; never, to my knowledge, injured by frost, drouth, vermin or insect; of course the crop is very sure. Various species of it grow in an uncultivated state in some foreign countries. Of late I have been informed, by good authority, that it is a native of this country, and found wild in various places on congenial soil, near runs, in unimproved mountains and woody lands; especially in the vicinity of Williams College, Mass., and in some places in the neighboring States, Vermont and New York. The green leaves are often used as pot-herbs. It is found in many New England gardens by single root, and used much in syrups to *nourish the feeble, and parry off consumptions.* The liquor, produced by boiling the dried leaves, is of a dark color, moderately tonic, restringent and exhilarating, much like *the black tea, but more nutritious;* of course, a very good substitute for people who will still use hot and exciting drinks. The root, cleaned, broken, dried and ground in a coffee or corn-mill, is a very mucilaginous and nutricious flour; resembling slippery-elm, oat-meal, arrow-root and sago. It has much the appearance in various respects of good, light colored rye-meal, and is peculiarly easy of digestion. A lady who could keep no other food on her stomach, was sustained three months on pudding of comfrey flour, made by pounding the dried roots in a mortar. Another, whose voice failed by disease, had it soon restored by the green root cut and simmered with molasses. Many years ago, I began to chew the root for cough and the good of my lungs, in my much public speaking, during the cold winters in the mountainous regions of New Hampshire. I pounded some fine for porridge and liked it well. Afterwards, at two different times, I had 4 lbs. ground at a corn-mill, to use with other flour or meal in gruel for family colds, coughs, and bowel complaints; and to give to neighbors for various diseases, especially of the lungs and bowels. As food, it operates slowly but powerfully, against the more common chronic complaints. It makes a very comforting and healing poultice for external bruises, wounds and sores. It is my belief that, if used freely with other articles of diet, it would have a strong tendency to prevent, not only coughs, consumptions, dyspepsy, diarrhœa, and costiveness; but also rheumatism, cramp, contractions of the muscles, sinews and cartilages; and also, many of the sore and destructive consequences of using ardent spirits, tight-lacing, hot drinks, over eating, over working, &c., and many other means of self-destruction, practiced by many people. Should the taste at first be in any degree unpleasant to any, like almost any kind of new food, then let a trifle of some pleasant condiment, slightly varying the taste, be intermixed, till by use, it shall itself become pleasant, as it did to myself. It is very easily cooked, requiring only a little scalding or baking. I often put a spoonful or two, into my dish of milk, and liked it well, with no other cooking. People may cook this, as they do other articles of food, *according to convenience or fancy.* I would recommend to use about one-fourth part of comfrey meal, with three-fourths of wheat, indian, barley and buck-wheat, for bread, pastry, wafers or dough-nuts, and a larger portion for gruel or porridge, or soups, or griddles, or puddings; *but not with rye.* With the other ingredients, you may use it for custards instead of eggs, probably to great advantage. What portion is soluble and nutritious matter, I have not ascertained, but think it about equal to that of rice, which is said to be about 90 per cent. I would now for mixing with my own food, gladly exchange two pounds of good wheat flour for one of comfrey-meal. It has not, to my knowledge, been cultivated as common aliment for man or beast, till done by myself. But it will probably yet prove one of the best and cheapest articles of healthful diet, now known; not outdone by the potatoe or Indian corn. It would be well for any who have ground, to go considerably into the cultivation of it, for experiment and profit, by root and herb, and to keep on hand some of the root, hay and meal, to show as specimens. Any arable soil will, especially that rather moist and warm, produce a crop according to its strength. Its blossoms afford excellent stock for honey. Its top seed is not abundant, and is gathered but slowly. It will produce a good or full crop much sooner by the caps of the roots, cut or broken from one to two inches below the place whence the tops proceed, planted about even with the surface of the ground, 8 or 10 inches apart, than by the natural seed. I think the best time to dig and replant is about the time of early plowing in spring; that the said root-seed might be well preserved through winter in a cellar, for planting in spring; and that by properly dividing the said caps, and by strict economy, *double the quantity of ground* dug over, may be replanted by the seed produced—you may dig *annually.* But the roots will be small, and the tops light. It takes two or three years for the ground to be well filled with roots. Which of these terms would be the most economical, and whether cutting the tops for hay, has any effect on the growth of the root, I have not yet ascertained. I have quit tilling the soil altogether. I cannot therefore give results of late experiments of my own, nor supply others with seed, as requested. What are its qualities for fattening domestic animals, whether by herb, green, or dry, or by root, green or dried, and ground, I know not; but presume good. Wash the roots soon after dug, break them shortish, spread them thin under cover, and without farther attention and without injury, it will become dry enough to be ground in a coffee or corn-mill. If you find difficulty in drying the tops, or any other herbage, for hay, without wetting or crumbling, heating or rotting; then, after drying by sun as much as convenient, put such herbage, whether comfrey, turnep, beet, or cabbage leaves, or potato tops, or clover, or weeds, or any other succulent herbs, into small piles or stacks of 40 to 100 lbs. each, according to the then stage of drying; and, if occasion require, before stowing it in the barn, pitch it over lightly, *each into another,* putting top for bottom; and then let them remain out, till sufficiently dry for preservation.

Allow me in this connection to suggest to all economical farmers, the expediency of having on hand a sufficient number of caps for such piles, *made umbrella-like* of coarse shirting, of 1½ yard each, cut in two square pieces, and then diagonally, and sewed together with preparation for about four weights to be hung at the bottom of each, to keep it in place at time of wind. These would cost but about twelve cents apiece, would, with due care, last many years, *and be immediately beneficial by the farmer's convenience, the saving of his labor and the quality and the quantity of his hay.*

If I have erred in any thing in relation to this article, I wish to be corrected by any candid and faithful physician, chemist, or dietetic philosophers; for I wish to deceive none on the subject.

I will now state some facts with regard to the production of symphytum, root and herb. April 1841, I dug from 18 square feet of ground of moderately good tilth or heart, besides the said seed caps, one large bushel of green root of two years growth. In this proportion an acre would yield 2420 bushels. This when washed, dried and ground weighed ten pounds; which would be 24,200 lbs. the acre. About 8 pounds of the meal I used the following winter, in my own food, and was by no means glad when it was gone. *As to the herb for hay.* At two cuttings on 15 square feet of soil, in 1842, the second

year from planting, July 15th and Sept. 1st, I obtained *four pounds* of good well-dried hay, better I think than good clover; which would be 5 tons and 1616 lbs. the acre. It is, I think, after the roots become considerable in the ground, capable of producing larger crops of hay than this. But let others try it for themselves, *root and herb;* and tell the world the results, as I have done.

Comfrey needs no tilling except the digging of the root and re-planting the said seed-caps for another crop once in two or three years. Whatever grass or weeds may grow with it, should be let alone, till mowed with the herb for hay. EZEKIEL RICH.

Troy, N. H., Jan. 1844.

CULTURE AND USE OF PUMPKINS.

MR. TUCKER—I have now read your excellent "Cultivator" for some years, and feel bound to make to you a frank acknowledgment that the benefit I have received from it, has been on a moderate calculation fifty times the amount of subscription. I know that I am within the mark. I will also add that I have been a considerable planter for twenty-five years, and continue to get something that is highly beneficial yet, from every number. In your No. 5, May, 1844, I find some judicious remarks regarding the *Pumpkin crop.* For this plant our climate and soils (lime) are singularly favorable. Limestone *prairie*-soil, excellent—lime-stone *woodland* superior. Our best cultivators of the pumpkin, plant them *eight feet* apart, one vine in the hill, in the intermediate space between two hills of corn, four and a half feet apart. Break the ground up twice *before* planting, *during frost* if possible—one plowing and two good hoeings makes a fine crop. When at maturity any young *Miss* might step from pumpkin to pumpkin, over the ground. A shovel-full of *ashes* thrown on each hill after planting, is excellent. We have no insect that disturbs them. A shovel-full of manure *on* the ashes superior.

As regards using or feeding. Using in any *way*, or to any *animal*, without *boiling*, or better, *steaming*, is absolute waste—and then using them *alone*, another *waste*. A short process with us is to boil or steam the pumpkin—let them get *cold*—put some shelled corn (yellow) into a cask of water until it swells—with a paddle or common pounder, mix the *corn* and *pumpkins* together. This for hogs; with *peas* the same way. For hogs, pour the *water* over the mess—*so save all.* For steers and milch cows cut up oats, or rye, or rice, or barley, *in the sheaf*, fine; mix as before mentioned—salt moderately the mass.

Chemical science and common observation has settled, that by some rather hidden cause, in a number of cases, two vegetable substances, containing apparently little nutriment *separate*, by amalgamation, after *boiling* or steaming, produce a singular *nutritive result*. *Turneps* are a long time fattening, if ever, a beef. *Cotton seed*, almost all *oil*—about the same. *Boil them both*—mix together—nothing better or quicker to fatten, or make *fine* beef.

A steer or hog with us, will starve to death on Irish potatoes alone. Boil them, and he rapidly fattens. Mixed with meal or peas, also boiled, and nothing superior to fatten—from well tried experiment much better than either separately used, paying with ample interest for all the trouble and expense.

Now for keeping pumpkins until June, as we do. Build under an *open* shed a rail-pen—(rails chestnut, one set will do for tweny years) lay the first bottom rails 12 inches from the ground—spread pumpkins so as not to touch; scatter dry shucks amongst them and next the rails, loosely—then over them lay rails 9 inches apart, so as not to rest on the layer of pumpkins; then more pumpkins—another layer and shucks loosely as before, and then rails, &c., until the pen is as full and high as you wish. In gathering, cut them off the vines, leaving a piece of stem; handle so as not to give the *slighest bruise;* haul for this purpose, on a *low-wheeled* wagon.

By following these directions, the full and great value of pumpkins will be discovered; and further, that whether as regards the health of the animal fed, or the economy of feeding, they are an *extremely valuable crop.* Pumpkins and Irish potatoes together, as above, a superior feed—excellent for *poultry* and *pigs.* Almost the same theory will apply to *turneps.* Sprinkle clean hickory ashes freely over both messes. I keep sifted young *hickory ashes* always by me, like *salt.* I know from full and fair trial the value, not only as regards rendering food to animals *nourishing*, but equally as segards preserving their *health* and vigor.

South Alabama, May 18, 1844. JOHN WILLIAMS.

GREEN CORN IN WINTER.

EDITORS OF THE CULTIVATOR—Will you or some of your numerous correspondents, have the goodness to make known, through the columes of your valuable paper, the best method of preparing green corn for winter use? In the month of January last, I purchased in Philadelphia a small quantity, put up in a round tin box, 6 inches long and 8 inches in circumference, that required no other preparation for the table than merely to be heated and seasoned to the taste. It was in all respects exactly like green corn fresh from the stalk, in August—a most incomparable luxury. Any instructions in this or other methods of preparing the article for winter use, would doubtless confer a favor on a large proportion of your readers. D. H. M.

Norristown, Pa., June 19, 1844.

Those who have had experience in preserving corn in the manner above stated, will confer a favor by giving us the particulars of the mode.—EDS.

HISTORY OF THE DRAG RAKE.

Judge Larrabe of Shoreham, Vt. made and used a rude one with a straight handle 10 or 12 years, and it was hardly noticed. But Coat's patent revolving *man rake*, fully proved the utility of the drag rake, and several were made in this vicinity. One with a long crotched and bowed handle made by Cyrus Barnum in 1837, was preferred. The next and next succeeding year, A. F. Cram of this town, added the stakes to the head to keep the hay from sliding over, and brought it to its present shape. He made about 100 of these, and moved away. They were well liked, & in 1842, were much inquired for, but none were in market. In 1843, I, in connexion with a neighbor, made and sold over 600. As an evidence of their credit where known, I state, that we retailed to the farmers of this town over 50 last season, at $1,50 each. Mr. Cram attempted, but failed to get it patented, (but not because he was not entitled to a patent.) It is however, known in this vicinity by his name. CLARK RICH.

Shoreham, May, 1844.

DURAND CORN—EARLY RIPENING.

MESSRS. EDITORS—For the benefit of the readers of the Cultivator, I will say that in 1842, a frost occurred here on the night of June 10th, which cut down most of the corn on low grounds. Capt. Vose, of this town, had a piece of corn near the river, which was all cut down. He waited some eight or ten days to have it start again, but it did not, owing probably to the germ of the grain having been frozen. He plowed the field again, and came to me and obtained half a bushel of seed corn, which he planted on the 20th of June. The corn soon came up, and grew rapidly, and Capt. V. informed me that he had a good crop, with little or no soft corn among it. L. DURAND

Derby, Conn., June, 1844.

WHITE WILD GEESE.

MESSRS. EDITORS—In your May No., I noticed a paragraph in reference to wild geese having been seen on the coast of Massachusetts, which were entirely white. I had before heard of the existence of such geese. A man by the name of Cooper, who some years since was in the employ of the Hudson's Bay Company, told me he had frequently seen such geese in the high northern regions—that in their winter migrations they generally passed down the Pacific coast, which was the reason why

they were not oftener found on the Atlantic. Occasionally, he said, a flock got lost or for some cause took an unusual direction, and this will account for their having been seen in Massachusetts.

Schenectady, June, '44. C. H. TOMLINSON.

CONVERSION OF SINGLE TO DOUBLE FLOWERS.

MESSRS. EDITORS—The conversion of a single into a double rose, by enriching the soil, is familiar to every one. The growth of organs half stamen and half petal, as if hurried unfledged from their nestling places, or as if a change of fashion had overtaken them in the progress of their development, are frequently seen in peonies. But nature sometimes displays the beautiful and wonderful in a series of variations upon a favorite theme;—as the following statement will illustrate.

Among the shrubs and flowers of a lady in Moscow, Western New-York, there is a rose bush, which continues in bloom from the early appearance of flowers, through the whole summer. Some of its buds are purely white, others are of a rich crimson color. Besides these there are roses whose petals are a part wholly white, and the remaining ones as wholly crimson—and these admixtures are in all proportions. Again the petals of some flowers are chiefly white with red streaks, and others are chiefly red with white streaks.

The soil is chip manure and loam; and nothing is known of the shrub, except that it was a shoot from some of the princely clusters in the garden of Mr. Sam'l M. Hopkins of Geneva. J. N.

FARMERS' AFFAIRS.

Union, as well as knowledge, is important among all classes; and among none more important than among farmers. Who can calculate the beneficial influences exerted by agricultural societies and cattle-shows? The people among whom agricultural fairs originated in this country—the hardy farmers of Berkshire, Massachusetts—cherish those exhibitions with increasing interest: And who will doubt that great good is produced by what thus meets with increasing favor after thirty-five years' experience among such a community as the people of old Berkshire? The history of the first efforts for holding fairs in that place, and the extent to which that model has been copied in other states, would form an interesting chapter in the history of agricultural progress: And certain are we that no man familiar with the facts in that chapter, would ever again doubt, if he has ever doubted, the importance of societies and cattle shows in promoting emulation and improvement among farmers.

By the by, the history of cattle-shows in Berkshire, and the influence that has radiated from the efforts made there some thirty-five years ago, might form an interesting portion of the exercises at the Great Jubilee at Pittsfield, in August, when the sons of OLD BERKSHIRE are to gather together from various states, to renew the acquaintances formed in early life, while cultivating the farms around their ancient homesteads in that well known county—a county, honored perhaps beyond example in the honors which her enterprising sons have secured for themselves in all quarters of the Union, wherever enlightened enterprise has led them. RHO.

HAND MILLS.

MESSRS. EDITORS—I see in the June No. of your Cultivator, an account of a new cast mill, to be worked by men or horses, which is spoken of very highly. In 1828 I saw in Florida a cast mill, made, as well as I recollect, upon the same principle pretty much as the new coffee mill, with a hopper that would hold one peck or half a bushel of corn, which was worked by a crank; and on the opposite side of the mill there was a balance wheel of cast-iron about three feet in diameter, which was screwed on to the other end of the same piece of iron that the crank was screwed on, which mill made excellent meal or hominy, and very fast for so small a mill, and which could be worked very easy with the assistance of the balance wheel when put in motion, and could be worked by any boy of ten years old. As I have ever been anxious to procure such a mill, I wish to ascertain whether there are any such made at any of your northern factories, and the price and probable expense of getting one to Wilmington, N. C.

A SUBSCRIBER.

Halesville, N. C., June 20, 1844.

We do not know of a mill like the one here inquired for—that spoken of in another part of this paper, as invented by Mr. Arnold is somewhat similar.—EDS.

SULPHATES OF AMMONIA AND SODA, AND NITRATE OF SODA.

These are very useful preparations and essential materials for manures; they may be used separately or collectively, and but a few experiments are required to detect the great advantages which they are respectively exercising. The Sulphate of Ammonia is according to the subscriber's ideas, best employed in a liquid state, say 2 or 3 lb. for a barrel of water, and by sprinkling over the ground morning and evening the effect is visible within three or four days, and Mr. Gilbert of Jersey City, has made the same observation with the cauliflowers; mushrooms may readily be raised in a week; there is no doubt but the advantages in using these preparations are two-fold. 1st. In planting corn you make it sprout quickly, and the grub-worm which is the greatest enemy to the farmer and inclined to attack the planted seed which at once begins to sprout.

2d. The plant certainly produces an early crop in every instance, and in a pecuniary respect of much service. The Sulphate of Soda may be used in a liquid state, but I prefer it in lumps mixed up with dung or horse manure, as it will then gradually decompose and form with the ammonia developed from the dung the various production of salts; it is invaluable for an early potato crop. The Nitrate of Soda is by itself too powerful to use, and may be wixed with the Sulphate in proportion of 1 lb. of the latter.

All the three salts may be used in solution or in a dry state and will prove very efficient, say:

2 lbs. Nitrate of Soda,
3 lbs. Sulphate of Ammonia,
5 lbs. Sulphate of Soda,

All mixed up and dissolved in one hogshead of water, if intended for artificial guano; to the above composition 1 bushel of bone dust may be added and it will be found highly useful. L. FEUTCHWANGER.

New-York, June, 1844.

CALVES WITHOUT HORNS.

MESSRS. EDITORS—I raise calves without horns, and think them quite preferable to calves with horns,—they are not liable to injure one another, and less shelter will answer for the same number, provided you do not put them in stalls. When the calf is from two to four weeks old, tie the legs, the same as if you intended to kill him. Cut off the hair on and around the horn—have an iron, an inch or more in diameter, square at the end, heat it to a red heat, and sear the lump down even with the surface of the head, and put on a plaster of shoemaker's wax, or some other adhesive plaster, to keep the air from it, and no more is necessary to be done. The calves do not suffer the least inconvenience from it. If the lump is not seared down close, there will sometimes grow a loose nub of a horn. J. S.

THE WHEAT CROP IN NORTHERN ILLINOIS.—The editor of the Prairie Farmer under date of May 28th, says: "From every quarter, we notice the reports are, that wheat is likely to come in luxuriantly. We can but repeat the opinion we have before expressed, *that the price of wheat is to be lower for years to come, than for years back,* in proportion to other articles; for the sufficient reason that so much more is produced. The folly of exclusive wheat raising is apparent."

☞ The *S. Carolina State Ag. Society* hold their next Exhibition at Greenville on the 2d Wednesday of Sept

FOREIGN INTELLIGENCE.

By the last packet at Boston, we received from our kind friends in England, an unusually large supply of foreign Agricultural Journals, among which are the *Farmer's Magazine* for May and regular files of the *Mark-Lane Express, New Farmer's Journal, Gardener's Chronicle, Agricultural Gazette, Farmer's Herald, &c.*

STATE OF THE WEATHER, CROPS, &C.—Accounts state the month of May was unusually cold in England, as well as in this country, but in respect to moisture, the weather was the reverse of what it was here—there being no rain of any consequence in England during the month, and but very little during the month preceding. The severity of the drouth had injuriously affected many of the crops. Some of the late spring grains had vegetated but very imperfectly—the pastures were in many instances dried up—in several districts the animals had to be supported by foddering, and the stock of hay was being rapidly consumed. It is hoped, however, that the drouth is at an end. Rains had fallen in some places on the last days of the month, and there was a prospect of more. In Scotland, there had been some deficiency of rain, but the wheat and other crops looked rather promising.

Extract of a letter received in New-York, dated London, June 3:—"Our weather has been singularly dry and free from all moisture for the last ten weeks—so much so as almost to have checked farming vegetation, with the exception of the autumn sown wheat—as for barley, oats and beans, they are just above ground, and the latter are in blossom, not six inches high. Of hay, compared with last season, the crop will not be one-fifth in quantity. In short, we must be large customers of your Western States, if matters continue as at present."

The introduction of live stock into England, which has taken place to some extent under the new tariff, has, it is said, resulted in a general loss to the speculators. Some of the animals, imported in store condition, had been put to stall feeding, but in no instance have they thriven well; on the contrary the change of diet had such an unfavorable effect upon them, that in the course of a few weeks they have been attacked with disease and rendered almost valueless.

Farm laborers were getting ready employ at from 10*s.* to 12*s.* per week.

The Mark Lane Express of June 3, says:—From the United States, and Canada, immense quantities of salted beef and pork, together with hams, cheese, bacon, &c., have come in, yet the demand for those articles has improved, and prices have been well supported. For instance, American cheese has sold at from 34s. to 48s.; beef, 30s. to 38s.; pork, 36s. to 40s. per cwt.; tongues, 24s. per keg; smoked hams, 52s. to 56s. per cwt., duty paid; beef, for ship's use, 80s. to 90s.; prime mess, 65s. to 70s. per tierce; and prime mess pork, 45s. to 52s. 6d. per barrel, in bond. At these rates, a good business has been transacted, with every prospect of higher figures.

AMERICAN SEEDS IN ENGLAND.—At a late meeting of the Council of the Royal Agricultural Society, Mr. COLMAN presented samples of several kinds of seeds which he had received from America, and which were distributed among 30 members of the council for trial, and their reports respectively on the results of their cultivation. Among the seeds were millet, broom-corn, herds-grass, or timothy, (*Phleum pratense,*) and several varieties of Indian-corn. Mr. Colman is strongly inclined to think that the early kinds of Indian corn may succeed in the southerly part of England. Mr. Colman also presented two plows, one made by D. Prouty & Co., Boston, and the other by Ruggles, Nourse and Mason, Boston. The committee of arrangements have made preparations for the trial of these plows with those of English manufacture, at the coming show of the Royal Agricultural Society at Southampton. Mr. C. likewise presented American grain-cradles and scythe-snaiths, of improved construction, besides turnep-weeders, manure-forks, &c.

AGRICULTURAL COLLEGE IN ENGLAND.—At a public meeting lately held at Cirencester, (Eng.) in furtherance of an agricultural college for the education of young men in the theory and practice of agriculture. Earl Bathurst, Lord Ducie, and other noblemen, as well as tenent farmers, took part in the proceedings. More than one half the necessary funds have been already subscribed or promised. A report from a committee who had visited the agricultural colleges of France, Switzerland, Prussia, &c., was read, stating that all those institutions were flourishing, and their beneficial influences were becoming more widely extended and acknowledged.

DEFECT IN POTATOES.—Several European writers seem to entertain the notion that the failure and poor quality of the potato-crop for a few years past, is owing to the degeneracy of the variety from age. They also recommend *unripe* potatoes for seed, for the reason, as is alleged, that they will vegetate more readily and vigorously than ripe ones. We do not think that either of these theories is supported by facts, in this country.

GUANO.—That is said to best which is brightest colored—being freshest, or last formed. On some of the islands in the Pacific, it is said its smell is perceptible at the distance of fourteen miles. There are places where it is seventy feet thick.

THE ALPACA IN GREAT BRITAIN.—It has been stated that this animal, which has within a few years been introduced into Great Britain, has not proved to be very healthy there. A late foreign paper says there can be no doubt as to the climate of England and Scotland being suitable, and that the difficulty lies wholly in getting them there—the animals always becoming sickly on their voyage from Peru. It is said they contiue healthy till they reach the Cape of Good Hope, when they begin to droop and frequently die. The account to which we allude, says there is a pair of these animals in Stirlingshire, (Scotland,) which have been kept there for eight or nine months, and stood the severe winter without injury, and more hardy than the native sheep, required less food, and subsist where sheep would die. They are said to be now in perfect health, very docile, following their keeper like a dog, and are very elegant and interesting. The weight of their fleeces was 17½ lbs. The owner anticipates that the time will come when the rough hills and heathy mountains of Scotland will be covered with them, and that they will become a source of wealth to the proprietors of the Highland districts, where they will thrive on those coarse kinds of herbage which neither horse, cow, or sheep will touch.

ROT IN SHEEP—It is well known that sheep affected with the rot, have insects in their livers called *flukes.* There has been much speculation in regard to these insects—whether they are the cause or the effect of the disease, or whether they are produced spontaneously in the liver, or proceed from eggs taken into the stomach of the sheep, are points on which writers are not agreed. In an English paper we notice an extract from a lecture lately delivered by Mr. Brightwell, in which he spoke of these insects. He says—"The vulgar notion seems to agree with the scientific one, viz: that the eggs or larva of insects are drunk in the water. The strongest proof of this I know, is in the relation of the woman at or near Cork, who had larva of the church-yard beetle in her stomach. By an absurd notion she drank a mixture of water and clay from a priest's grave! I believe there are doubts whether the larva within animals ever become insects or arrive at the pupa state. In the case just noticed, I think it is said they did so; if not that foolish woman must have taken great draughts at at various times, to produce the vast quantity of larva which at various times came from her stomach. Although larva may come from animals' stomachs with the excrements, and afterwards become perfect insects, still I cannot see how they can pass from the liver. Whether my views on the rot in sheep's livers be right or wrong, I am safe in saying that the animals originally belonged to high and dry districts, and the nearer their pasturage comes to that, the less liable will they be to the rot, both in foot and in liver."

PRESERVING GRASS FOR FODDER.—Pr. Johnston says: "A method has lately been tried in Germany which seems in a great measure to attain this object. Pits are dug in the earth from ten to twelve feet square, and as

many deep. These are lined with wood, and puddled below and at the sides with clay. Into this the green crop of grass, clover, or vetches is put, just as it is cut. Four or five cwt are introduced at a time, sprinkled with salt, at the rate of one pound to each cwt., and if the weather and consequently the crop be dry, two or three quarts of water should be sprinkled on each successive layer of four or five cwt. is spread evenly over the bottom, is well trodden down by five or six men, and rammed as close as possible at the sides with wooden rammers. When the pit is full the topmost layer is well salted, the whole then covered with boards, or a well fitting lid, which has a quantity of earth laid above it for the more perfect exclusion of the air. The grass speedily heats and ferments, and after the lapse of about six days, the whole has sunk about one-half of its original bulk, when the lid may be removed and the space filled with fresh grass. When thus fermented, the grass has the appearance of having been boiled, has a sharp acid taste, and greedily eaten by the cattle. The pits should be kept coverd for at least six weeks, after which they may be opened successively as required, and be kept open till their cantents are consumed, without suffering any injury from contact with the air. One experimenter says, that by giving only 20 lbs. a day of this salted fodder, along with chopped straw, he kept his cows in condition during the whole of the winter; another states that, on a daily allowrnce of the same quantity, his cows gives a rich and well-tasted milk."

We are not prepared to say how this plan might succeed. It syems to be somewhat similar to that sometimes practiced for keeping brewers grains.

THE UPAS TREE—The story of the "Bohon Upas, in the Island of Java," which constituted one of the reading lessons in a school book very generally used in New-England some thirty years ago, will be recollected by many. The poisonous qualities of this tree were represented as so wonderful, that no animal could with safety approach it within the distance of half a mile, and birds, when attempting to fly over it, were said to fall down dead. Criminals, when under sentence of death, were said to be allowed their choice, either to visit this tree, and collect some of the gum or sap, or suffer immediate execution—the manner of execution being shooting with arrows, dipped in the sap of the upas. In a late number of the London Gardener's Chronicle, we find the following notice of this tree:—"A living plant of this celebrated tree has been lately presented to the Horticultural Society by the East India Company, and is now growing in the Chiswick Garden. It is in perfect health, and, notwithstanding the fables of Dutch travellers, perpetuated by Darwin, may be approached with safety. It is, however, so virulent a poison that no prudent person would handle it without proper precaution."

INSECTS IN WHEAT.—In a lecture on the "diseases of wheat" lately delivered in England by Rev. Mr. Sidney, mention was made of the "wheat midge" and "ear cockle," magnified representations of which were exhibited. "The former is a fly something resembling a gnat; the latter is a small eel, the larvæ of which are deposited inside the grain in a cottony substance, and they are so minute that many thousands exist in a single grain of wheat. These animalcules are very destructive, and the chrysalis of the insect is supposed to come to life in the farm yard where the refuse of the threshing floor is thrown, as it exists in the chaff. As a means of preventing this evil it is recommended that the chaff should be sieved, and that the dust, in which the chrysalis of the insect is always to be found in great numbers, should be taken away and burnt." We believe this "wheat midge" is the same insect which has been improperly called the "weevil" in this country.

AMERICAN PRODUCE.—The following extract from a letter just received from a farmer, who emigrated from the Cotswolds to the United States of America, has been sent us by a correspondent who is of opinion that the facts communicated tend to show, that if agricultural produce was allowed to be imported into this country, free of duty from such a boundless country as the United States, the British farmer and grazier would be entirely superseded in the home market. The writer of the communication, we may add, is located in the Ohio state, and his letter is dated December 6. "Cattle and sheep," he says, "are as good as the average in England; of sheep, the Merino breed appears to have been early introduced, and followed by the Leicester and Southdown; the Merino is not a bad sort, but I think the introduction of our English breeds a great advantage. Oxen are worth from 6*l.* to 6*l.* 5*s.*; cows and calves, from 2*l.* to 4*l.*; and other stock in proportion. Fat wether sheep, 18lb. per qr., 6s.; a man may buy a good flock of store sheep for 4s. 2d. each. Fat pigs, those above ten score, 2s. 6d. per score; under that, 2s. 3d. The large hog is worth most money, as the fat parts can be turned into lard, and more made of it than the pork or bacon could fetch. There are thousands of sheep killed, the legs salted and dried, and the remainder boiled or fried to obtain the tallow. Butter sells at 3½. per lb.; cheese, at 2d, to 2½d. The average price of hay is 20s. per ton; good cider, 9s. the 100 gallons—so abundant was the crop that the apples will not all be used. I sold two loads of wheat at 3s. 10½d. per bushel; oats fetch 11½d. I think you would be surprised to see how things come forward in the spring. I had oats sown the 12th of May, and cut in July. I expect you will get some of the Ohio wheat, as a great deal of it goes to Canada, which is not more than 100 miles distant by water."—*Glouc. Chr.*

WARBLES IN CATTLE.—A few applications of strong brine will at once destroy warbles in cattle, in whatever stage they may be found to exist; after which the animal will thrive better, and when it comes to be slaughtered, both the hide and carcase will be more valuable.

THE EGG TRADE—To give an idea of the extent of this branch of trade, it may be stated that the Princess Alice, from Dublin to Fleetwood, on Sunday week, brought 38 tons, or about 70,000 eggs. The whole were dispatched by railway to Manchester, Birmingham and London.

WHITE CROWS.—We were shown to-day, at a house in the Kirkgate, a brace of crows, nearly as white as snow. They are this year's birds, and were taken out of the same nest in company with a brother or sister of the ordinary color. When anxious for food, they caw their vernacular in splendid style, run about the floor, and are as well-grown as birds can well be of the same age.—*Dumfries Courier.*

GOOD FARMING.—It may be laid down as a standing rule, and as a guide to direct our exertions, that all good farming, the whole of that process by which bad land is to be converted into good, or land naturally good and productive is to be continued in that state, is comprised in the three following operations of husbandry. 1. To carry off all stagnant and superfluous water by means of judicious draining. 2. To return through the medium of manure, the strength and fertility which has been extracted from the land by cropping. 3. To eradicate all noxious weeds, that the strength of the manure may be thrown into the crops and not into the weeds.—*Rawstorne s Remarks on Lancashire Farming.*

DEANSTON FARM.—We took the opportunity, while at Stirling, of vising the farm of the celebrated Mr. Smith, of Deanston. In the plantation adjoining the improved fields, the original state of the soil may be seen and compared with the same soil in its improved state. The contrast is very great. There are no open drains or ditches on the farm, nor open furrows or gaws of any kind. The plow used here has a moveable mould-board, which the plowman turns over at the land end, then enters at the same place, the earth being always thrown to the same side. The fields are thus laid out quite level, no land lost with open furrows, and no time spent in going round ridges in turning. This system answers well with Mr. Smith, who reaps his crops with a reaping machine, and does not require ridges as a guide in harvest. At the entrance to each field the ground is paved about four feet within the gate, and to the road outside, to prevent the ground being poached with carts or cattle. The division fences (thorn hedges) all run parallel. A pump-well is fixed at the corner of four fences, and supplies, by means of troughs in each adjoining corner, water to four fields at once. The drains, have never in a single instance, required to be opened and relaid. They are formed en

tirely of broken stones. The grass lands, in some places, were beginning to fog, and seem, in our opinion, to be in need of lime. This farm (we believe about 150 acres in extent) is an excellent example of the benefits of furrow draining, combined with that part of the system which is Mr. Smith's own, subsoil plowing. But the whole success of the system, as shown by the increased produce of this farm, cannot be entirely ascribed to draining and subsoiling. Great part of it is due, no doubt, to the high price got for the produce consumed at the Deanston cotton works, where upwards of 1,000 people are employed, and which is within one hundred yards of the farm offices; and most farmers will be inclined to think that much of the fertility of the farm is due to the manure supplied by the village (which adjoins the farm), where this large family of human beings live.—*Dumf. Cour.*

SHEEP ON THE HIGHLANDS OF SCOTLAND.

On the wild mountain ranges of Scotland, where the ruggedness of the soil does not admit of cultivation, immense flocks of sheep are kept. In the late foreign papers we notice an account of a "club" formed by the farmers of a portion of this region, the object of which is to ascertain and record the prices of the cattle, sheep, and wool of the district during the past year, and to collect any other usefut information. We have undoubtedly much land in this country now lying waste, which might be appropriated to the grazing of sheep with as much profit as is yielded by these Scottish lands. The following extract will interest many of our readers:

"The usual calculation is that, in the North Highlands, five acres of pasturage are required for two sheep; whilst south of the Frith of Forth three acres will carry two sheep. Scarcely any hill pasture in Scotland, in its natural state, will carry one sheep to the acre. The extent of land thus occupied by many farmers is immense many of them counting "hirsels" to the number of from 3,000 to 5,000, and even 10,000, whilst some go much beyond this; Cameron, of Corriehoyle, for instance, whose holding lies in the Lochiel country and away by Glencoe, counts his 40,000 bleaters on the wild mountain sides and deep valleys of the far north. Mr. Cameron, who was once a common drover, may thus be reckoned as, next to Prince Esterhazy, the greatest flock-master in the world. Farms of the kind of which we are speaking, are nearly all let upon leases of nine or thirteen years, whilst the leases of the arable farms in Scotland run from 15 to 19 years. The locality of Mosspaul is wild, stern, and rugged—the "Wisp" [name of a mountain] itself rising immediately behind the inn, to the height of 1,950 feet above the level of the sea, whilst "Alps upon Alps arise," all around closing in a narrow valley, at the foot of which there runs a mountain stream called the Ewes, and along which lies the road to Edinburgh, hemmed in on each side by immense hills, which rise almost perpendicularly, and strongly remind the passenger of the accounts he has read of the far-famed Kyber Pass. The inn of Mosspaul itself, a solitary dwelling amidst the mountains, stands at an elevation of 620 feet above the level of the sea, and is built on the very confines of Roxburghshire—the stables, barns, &c, which adjoin being in the county of Dumfries. For miles and miles around and along the road, the property is owned by the Duke of Buccleugh, and is divided into holdings, such as we have already indicated—many of the farmers being owners of from 3,000 to 5,000 sheep.'

BLIGHT IN PEAR-TREE.

Dr. Mosher, of Cincinnati, has presented to the Horticultural Society of that city, a paper on this subject, in which he states his belief that the blight is caused by a species of aphis. He first examined with a lens the blackened leaves and branches, extending his observations to the bark and wood, without discovering any satisfactory cause. He always cut off the affected branches, but no sooner was this done, than others were attacked in the same manner. At length, on examining some healthy branches, adjacent to those which were diseased, he discovered the enemy. The insects could hardly be seen by the naked eye, but by the aid of a lens, were magnified to the size of a quarter of an inch, and were busily engaged with their proboscis, feasting on the vital juices of the tree. The leaves, being thus deprived of the necessary sap for nourishment and elaboration, soon perished and turned black by the heat of the sun, while all that part of the branch and trunk below, dependent upon the elaborated sap of the deadened leaves above, shrunk, turned black and dried up. The fruit became shrivelled, and shared the same fate. Dr. M. thinks the only remedy is to cut off the affected branches and burn them. Particular care is required to take off every limb on which the enemy can be found. Cutting off those which are already deadened, will be of little avail, as the insect has then begun depredating on other branches, though the consequences may not yet be obvious.

HOLLOW HORN.

A writer with the signature of "*Grazier,*" in the Louisville Journal, describes very particularly a case of hollow-horn in a cow. He has no doubt that the disease is occasioned by "hard keep." He says he has frequently seen cattle bought from persons who had almost starved them, become fat, and to all appearance healthy; but would suddenly exhibit all the symptoms of the hollow horn. Boring the horns, he thinks is only a palliative, not a cure—as the matter in some cases cannot be discharged at a gimblet hole. Boring was tried in the case he speaks of, but without effect. The horns were finally cut off, and the cow got well. In conclusion, he says, "Hollow horn, if treated as above, will *certainly* be cured, and the animal rendered as useful as ever, either for milk, for work, or for fat." We would suggest whether this is not rather a *large* conclusion to be drawn from a single case? We have known this remedy frequently tried, accompanied with all possible care, but without success. In desperate cases, no remedy is infallible. *Preventives* are best; but if animals become diseased, they should be attended to as soon as attacked.

RICHNESS OF MILK, &c.

A writer in the Louisville Journal, speaking of the experiments of Mr. Bement in making butter, given in the March number of the Cultivator, says:

Mr. B. expresses surprise that a cow whose milk produced little butter, as showed by the lactometer, or little cream, (I have forgot which,) made the fattest calf. A word as to the cause of this. Though not able to use technical terms or to give a chemical analysis of milk, I believe I can be understood. The component parts of, new milk, as far as dairy analysis shows them, are butters cheese, and whey; and in the milk of individual cows there is a wide difference in the proportions; and cowe that give little butter *may* make it up in cheese, and thoso that give little butter and little cheese in proportion te their milk *must* make it up in whey. I do not recollect of ever seeing a comparative statement of the nutritive qualities of butter and cheese, but I have found in feeding calves from the bucket, instead of suckling, that the abstraction of the butter from the milk made less difference than I had anticipeted, and that the substitution of a pound of molasses was an equivalent for every pound of butter withdrawn. And I think it possible that a cow where the *caseous* part abounds in the milk is as likely to make a fat calf as one whose milk is composed of *butteraceous* matter and serum.

No proper test has been found to prove the quality of milk, which, as it comes from the cow, is a little heavier than water. The tube lactometer only shows the cream which does not determine the richness; and beads are useless, as water administered to new milk would lessen its specific gravity and might be mistaken for cream.

ORTHOGRAPHY AND ETYMOLOGY.—"MOLASSES," says Webster, "is an incorrect orthography of *Melasses.*" The word is said by Bordley to have been derived from *mel*, honey, and *assinus*, an ass—from the circumstance of asses being used in grinding sugar-canes.

THE CULTIVATOR ALMANAC FOR 1845.

The Almanac which we issued late in the season for this year, met with such success, that with our limited edition, (30,000 copies,) we were unable to supply the demand for it. This success has induced us to issue an edition for 1845, and to enable us to supply all demands for it, we have had the work stereotyped, and are now ready to supply orders from any section of our country. We subjoin a list of the

CONTENTS OF THE CULTIVATOR ALMANAC FOR 1845:

1. Astronomical Calculations, by David Young.
2. "The Circle of Fruits," a beautiful engraving, representing the time of ripening of the various kinds of Fruits, by which a succession is furnished the year through.
3. Useful Recipes.
4. Hints for the Months.
5. Plan of a Farm House
6. Village Door Yards.
7. Crested Fowls.
8. The Shepherd's Dog.
9. A Cheap Hen House.
10. Raising Melons, Cucumbers.
11. Pruning Orchards.
12. Improvements in Agriculture.
13. Hay Box for feeding Sheep.
14. "A stitch in time saves nine."
15. The Common Horse Rake.
16. Remedy for smokey chimneys.
17. Culture of Pole Beans.
18. Hanging Gates.
19. Grafting.
20. Merino Sheep.
21. Experiments.
22. Protection of Vines from Bugs.
23. Cutting Straw, Hay, &c. for Fodder.
24. Hints to Young Men.
25. Prevention of Accidents from Bulls.
26. Hot Beds.
27. Culture of Millet.
28. Speed the Plow.
29. Plan of a Barn.
30. Coulter for cultivating corn.
31. Agricultural Readers.
32. "Did'nt I drum well?"
33. Flowers.
34. Propagation by Layers.
35. Early Fruit.
36. The Cultivator.
37. Agricultural Papers.

☞ It is printed in the style and of the same size as the Cultivator Almanac for 1844, and illustrated with THIRTY ENGRAVINGS, and sold at the low price of $2 per 100—or $15 per 1,000. ☞ Booksellers or others, can have editions printed with their imprint, and occupy the last page with an advertisement, for $5 extra on the first 1,000 copies.

CHARCOAL.—I wish some one would give us a feasible mode of pulverising charcoal. Reducing it to powder with flails is out of the question, except for a few bushels. Will Za. Drummond, Esq. of Va., tell us how he manages it? JAMES BOYLE.

AG. PUBLICATIONS.—We must study our profession; we have many judiciously conducted periodicals, and many scientific works, and no man who has a proper pride in his profession but reads some agricultural paper with all the zest that ever a politician devoured a partizan journal. These productions from practical farmers, amuse, interest, and instruct. They excite us to increased exertion;—inspire us with confidence in undertakings which otherwise would be abandoned upon the first failure;—give us plans, the most approved, for all our farm buildings;—make suggestions which are often of the greatest importance:—indeed, they act as "a friend in need,"—as a wise counsellor, a judicious, experienced adviser. These papers are of as much importance, and are as necessary to the planter in the successful prosecution of farming as the political newspaper is to the statesman, or the "reports of cases" to the lawyer.—*Bowie's Address.*

CURE FOR UNRULY MILKERS.—Make a pen of just the size that the cow can comfortably stand in and no more. This you can do in the corner of your yard, by setting down three posts, and boarding them up fence-like, leaving them open at the end to drive in the cow. Let a space be left open at the side where you wish to milk. Put your cow into it and fasten her in by stretching a chain across the end of the pen behind her. Then take a piece of rope, say fifteen feet long, and tie one end of it to a post behind the cow, and near its length distant from her: tie the other end to the leg of the animal, just above her foot, draw it back as much as it would naturally be for her to be milked. Then sit down and milk the cow at your leisure. It will take a man an hour and a half to make the pen; and when once made, it is very little more than to milk without. She may object going into it the first and second time, but will afterwards give no trouble.—*Selected.*

GREAT SALE OF ELECTORAL SAXON SHEEP.

THE undersigned will sell at vendue the two flocks of *Pure Electoral Saxon Sheep*, belonging to the estate of the late Henry D. Grove, as follows:

1. That at Grainger, Medina co., Ohio, consisting of about 400 sheep, on the farm now occupied by them, on the 30th of *September next.*

2. The home flock, at his late residence in Hoosick, Rensselaer county, N. Y., consisting of about 350 sheep, on the 15th of *October next.*

A rare opportunity is offered to those who may be anxious to improve the quality of their flocks. The following is the opinion of the distinguished manufacturer who has usually purchased Mr. Grove's wool, of the character of these flocks:

"The purest blood in this country was introduced by the late Mr. Grove in his own flocks, the wool from which I have been familiar with since their importation in 1827. In point of fineness and admirable felting qualities, this wool is unsurpassed by any flock in this country, and the fleeces average about half a pound each more than any other I am acquainted with of equal fineness. SAM'L LAWRENCE.

Lowel, April 9, 1844."

Terms of sale, cash.—Reference, Sam'l Lawrence, or either of the subscribers.

Buskirk's Bridge, April 20, 1844.

ELIZA W. GROVE,
W. JOSLIN,
S. A. COOK.

my1 —5t.

FINE FARMS FOR SALE.

THOSE very superior Farms situated near Galway Corners, in the county of Saratoga, collectively known as the Earl Stimson Farm, will be sold cheap and on terms most accommodating to the purchasers as to credit. The property consists of about 340 acres, is so situated as to be conveniently divided into three or four farms, all having the necessary buildings, and will be sold together or in parcels, to suit purchasers. Each farm is properly divided into pasture, tilled and wood land, and is in the highest state of cultivation, fenced in the best manner and with the most durable materials. The property comprises among other buildings, a large and convenient hotel, which is a favorite resort of families in the summer on account of the superior healthiness and beauty of the country. The farming buildings of all kinds are most extensive and convenient for all the purposes of agriculture and the raising of stock. The premises also include a country store, a most eligible location for a country merchant, having been occupied as such for about forty years. It is within two hours drive of Ballston, Saratoga, and Schenectady. The farm is well known among leading agriculturists, and in the agricultural periodicals, as the Pattern Farm. For terms, &c., apply to J. OAKLEY,

Oct. 1.—tf. No. 75 Nassau street, New-York.

FIELD SEED STORE.

THE subscriber continues to keep constantly on hand at his long established Seed Store, a supply of the best quality and kinds of Field Seeds, viz:

Red Clover, of the large and small growth,
Timothy, Red Top, or *Herd's Grass, Orchard Grass,*
Lucerne, or *French Clover, White Clover,*
Trefoil, Kentucky Blue Grass, &c. &c.

Also, the different varieties of Wheat, as White Flint, Red Chaff, Mediterranean, and English—for sale in lots to suit purchasers at moderate prices, by ISRAEL RUSSELL,

Feb. 1, 1844 —mar. oct. 26 Front-street, New-York

N. B. The following description of some superior English Wheat sown in the month of October last, the product of which will be for sale at the above Store, is given by a respectable English farmer in the State of New-Jersey, who sowed about eleven bushels, a sample of which can yet be seen. "It is called the Uxbridge White Wheat, and is the most noted Wheat they have in England, it being of fine quality, always commands a high price, as the flour is used by the biscuit bakers in London; it is great for yielding, and puts out a much larger ear than any wheat I have seen in this country. I saw when in England, three years ago, on my brother's farm in one field, 120 acres, that yielded 40 bushels and upwards to the acre. It grows very strong, and is not liable to be laid by heavy rains. I will warrant it free from any soil whatever. I did not see in the eleven bushels, a particle but Wheat; and I have sown it on Clover seed, on purpose that there shall be nothing but Wheat; and I will put nothing in the barn with it, so as to put it beyond the possibility of a doubt of its having any thing in it or getting mixed with other Wheat, which through carelessness is often the case. I have grown a great deal of it myself in England, and know from experience that for yield and quality, there is no Wheat to compete with it. Its general weight is from 64 to 67 lbs. per bushel. It is smooth chaff, and easy to thrash, which is not always the case with smooth chaff Wheat"

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☞ ADVERTISEMENTS inserted in the Cultivator, at $1,00 per 100 words for each insertion.

BEMENT'S AMERICAN HOTEL,

No. 100, State-street, Albany.

THE subscriber most respectfully announces to his friends and the public generally, that he has taken a lease for a term of years, the American Hotel, No. 100, State-street, Albany, which has been thoroughly repaired, completely renovated, and newly furnished throughout; and in quality of beds, cleanliness of rooms, will compare with any other establishment in the city.

In location, this house has many advantages, being situated in the centre and one of the most beautiful and airy streets in the city; within a few moments walk of the Eastern and Western Rail-Road depots, and the landings of the steam-boats; about midway between the Capitol, City Hall, public offices, the banks, post-office, and business parts of the city, renders it very convenient for the man of business.

The subscriber places much reliance on the continuance and support of the *Agriculturists* throughout the union, who may visit the city, and pledges himself to spare no exertions, to render their stay agreeable, should they favor him with their company.

Three Hills Farm will be carried on as usual, under my own superintendance, by a careful manager, and the breeding and rearing improved stock, will be continued as heretofore. C. N. BEMENT.

Albany, Jul 1, 1844

TO FARMERS, HORTICULTURISTS, &c.

GUANO.—The subscribers offer for sale 200 bags, about 220 lbs. each, of this valuable and economical manure recently imported from Peru. For particulars as to its quality, uses, &c. beg reference to the Cultivator of May and June, and the June number of the Boston Magazine of Horticultur. WIRGMAN & NEWMAN,

July 1—2t. 44 Front-street, New-York.

E. VAN SCHAACK'S MAMMOTH VARIETY STORE,

44 *Market-street, Albany, N. Y.*

THIS establishment has recently been greatly enlarged, embracing three sales rooms, each 60 feet in depth, and now presents the greatest variety of goods and largest assortment of *Wooden Ware, Baskets, Enamel and plain iron Hollow Ware, Shaker manufactures Brushes, Combs Pocket Cutlery Scissors Razors Fancy Goods, Perfumery, Toys, &c. &c.* to be found in the country.

Ladies and gentlemen passing through the city, will confer a favor on the proprietor by calling to examine the assortment, though they may not wish to purchase. Merchants supplied on the most reasonable terms. E. VAN SCHAACK.

N. B. A good assortment of Garden and Flower Seeds, Roots, Herbs, &c. constantly on hand. July 1—1t.

KENTUCKY BLUE GRASS AND HEMP SEED.

GEORGE, LAPPING & CO.

Seed and Agricultural Merchants, Louisville, Kentucky,

KEEP constantly on hand a good supply of Kentucky Blue Grass and Hemp seed, which they are willing to sell to eastern dealers on favorable terms. They are also dealers in Millet, Clover, Timothy, Orchard Grass, &c. july—2t.

TO FARMERS AND GARDENERS.

THE subscriber is now preparing synthetically the guano as by the analysis of Dr. Charles T. Jackson of Boston, and will be able to furnish it at 5 cents per lb.

The price of Sulphate of Soda is half a cent per lb. by the barrel of about 200 lbs.

The price of Nitrate of Soda is 5 cents, and the price of Sulphate of Ammonia, is 7 cents per lb.

Compound chemical whale oil soap has stood the test of three years use, and is found beneficial either as a wash on trees, and with a syringe over the fields where the marauding insects, such as the ants, (either black, red or white) curculio, turnep beetle, coccus, rose bugs, leaf lice, peach, apple and pear tree insect, caterpillars, &c, have hitherto made their ravages upon the exotic and indigenous plants, roses, geraniums, cactus, rhododendron, camelia, orange, lemon, pear, apple, cherry, apricot, nectarine and peach trees, grape vines; and in the fields, the wheat, rye, rice, cotton, sugar, tobacco, cabbage, turneps, potatoe, cauliflower, salad, celery and other plants. For further particulars apply to DR. LEWIS FEUCHTWANGER,

July 1—1t. No. 60, Maiden Lane, New-York.

AGRICULTURAL IMPLEMENTS, &c.

THE undersigned are Agents in this city to sell the following celebrated machines, viz:

Hussey's Premium Corn and Cob Crusher.
Dickey's " Fanning Mill.
Platt's " Portable Grist Mill.
Hovey's Premium Straw Cutter, (Spiral knives.)
Warren's " "
Hull's Stalk and Straw Cutter.

Being proprietors of the now celebrated "Warren's Improved Portable Horse Powers and Threshing Machines," for one, two and four horses, they continue to manufacture and sell them with increased success and satisfaction. Of the two horse machines, one correspondent states, "after a fair trial with barley and wheat with two horses, I can thresh in a clean and thorough manner, at least 30 bushels of wheat in one hour, with comparative ease to the horses; and this day, without driving them at all hard, in sixty minutes, 200 sheaves of wheat of a large size were threshed out in a clean and excellent manner, which is about 15 bushels. The straw, after threshing, is easily bundled; and as it comes out whole and unbroken, I consider these machines on that account important; and as only three hands are required to do the work well, I think the great saving of labor such an item as to make them what is much needed by many of our farmers in this section of country."

The prices for these machines are very low, viz:—two horse power alone, only $50—two horse power and thresher, together, $75—one horse power and thresher, $60—four horse power and thresher, from $100 to $110. Cash payable in this city on delivery. Liberal deductions made on all machines and implements to dealers.

L. BOSTWICK & Co.

July 1—1t. 146 Front street, New-York,

PARTNER WANTED.

A GENTLEMAN in the Rock River country, Ill., owning a tract of land capable of supporting ten to fifteen thousand sheep, is desirous of engaging a partner to embark with him in the sheep and wool growing business. His location is unsurpassed for all the requisites for keeping sheep. The region is elevated, commanding a view of the surrounding country for the distance of ten to twenty miles—presenting to the eye some of the most beautiful scenery imaginable. Sheep have proved healthy there—showing an increase in weight of 10 to 20 per cent on being brought from Ohio and Indiana.

FARM FOR SALE.

☞ The same gentleman offers for sale another farm, near the one mentioned, and lying, also, on Rock River. It is believed to be one of the most desirable situations in the western country—combining all the varieties of surface required for utility, convenience, or beauty, with land enough for feeding eight or ten thousand sheep, and other stock in proportion. There is now native meadow on which hay of excellent and nutritious quality may be cut, equal to wintering ten thousand sheep. On it is a farm house and some fencing. The whole is bounded on one side by Rock River, and on the other by a never failing creek of pure water, equal to driving a flouring mill. But two miles distant, is a thriving village, where may be found abundance of shops and useful artizans. The place is perfectly healthy, and for beauty and scenery is rarely equalled; and in the hands of a person of taste and means, is capable of becoming perfect for the useful and ornamental. There is a grove of 90 acres on the place, situated on the bank of Rock River, which stream, it is believed, will shortly be made navigable to the Mississippi.

SHEPHERD WANTED.

☞ The owner of the above mentioned farms, wishes to procure the services of a good practical shepherd, of industrious, prudent habits and good judgment. (A scotchman would be preferred.) It is not wished to confine his attention to *one* flock; but rather that he should have a general oversight of *several flocks* which the gentleman proposes keeping—all within a circle of some six to nine miles. It is desirable that he should be familiar with the diseases of sheep and modes of cure—the best food and other treatment most likely to ensure success. He should also be capable of keeping such accounts as are useful, touching the stock, &c. For further information, apply, *post-paid*, to the Editors of the Cultivator, Albany. July 1, 1844